PHILADELPHIA, MARCH 24, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON CHLORAL-POISONING, ACUTE AND CHRONIC.

Delivered January 13, 1883, at the Pennsylvania Hospital,

BY J. M. DA COSTA, M.D.

(Specially reported for the *Medical Times*.)

GENTLEMEN,—This is a case which, if you had seen it a few days ago, you would not have given much for his chances of recovery. He was brought here in a truly desperate condition; but now he seems to be entirely well, and is going home to-day.

His name is C.; he is 45 years of age. This is all we could learn when he was admitted, January 9, except that he had come to this city to enter the Franklin Reformatory Home, where he remained a few hours, ate his dinner, and then fell into a stupor from which he could not be roused. He was sent here, on the same evening, with the idea that he had taken some narcotic poison. We have since obtained from him the following statement. He had an attack of acute rheumatism while in the army in 1865, and has been subject to joint-pains at intervals since that time. About four weeks before admission, or about December 9, he was seized with pain and inflammation in all his large joints, which crippled him, but did not keep him in bed. He used trimethylamine, alkalies, and salicylic acid without relief, and finally took thirty grains of chloral at night, to enable him to sleep, and continued this for some weeks. Believing that a little rest and change of surroundings would do him good, he decided to stay for a week or two at the Franklin Home, and left his home in New Jersey for this purpose about eight o'clock on the day of admission. He still had some joint-pains, and to relieve them he purchased an ounce of crystallized chloral hydrate, which he was able to do, being himself a physician. In the afternoon he swallowed some of the drug, without weighing it, and the result was that he was deeply narcotized: he probably took, within an hour, about six drachms of chloral hydrate, and, fearing this would not be enough, he also took half a grain of cannabis Indica extract. As a result of this, he lost consciousness, and became comatose, in which condition he came under our care shortly afterwards. As regards the nature of the case, it is evident: the man, being in the habit of taking chloral, takes six drachms in the course of an hour or so in the afternoon, and is brought into the hospital directly afterwards with the symptoms of chloral-poisoning. He was completely narcotized, and his muscular system was perfectly relaxed. His temperature was normal. Pulse rapid, 140, quite weak, and compressible. Respiration noisy and stertorous, 28 in the minute. The pupils were at first contracted, afterwards dilated, afterwards again contracted; they were mobile, though sluggish, and responded poorly to the light; they were changeable, though for the most part contracted. The urine drawn by the catheter contained no albumen and no sugar,—I beg you to remember this,—but it did contain a small amount of alcohol. The bowels were moderately loose; but you must not pay much attention to this, for he had been long subject to chronic diarrhœa. On questioning him upon the subject, it was ascertained that he had taken a glass of whiskey on leaving home in the morning, about eight o'clock, but it was not more than an ounce, he says: this, however, would hardly be sufficient to account for the presence of alcohol in the urine nearly twelve hours afterwards.

When he came into the house, his was a very unpromising case. There were muscular contractions upon using the battery, but no appearance of pain was called forth even by strong faradic currents. Artificial respiration was kept up when the breathing failed, inhalations of ammonia were given, and electricity steadily applied, until the patient revived and became conscious. His stomach was emptied with the stomach-pump, although I do not attach much importance to this, for the chloral by that time was probably absorbed; but still it was the proper method of treatment in case there was some remaining to get rid of. We did not trust to this, however, but gave him carbonate of ammonium; and the next morning, when I saw him for the first time, he was ordered strychnia (one-sixtieth of a grain), given hypodermically every third hour. The pupils were now moderately dilated, but responded a little to light. The muscles were relaxed. The impulse

of the heart was feeble, and the pulse was feeble. The patellar tendon reflex phenomena were very much reduced. Sensation was now normal. He recovered rapidly, and, in fact, commenced to improve visibly about four hours after beginning with the strychnia. He had taken three doses of the strychnia, and was doing very well, when he was detected the next day in taking another dose of chloral from a paper which he had had concealed in his pocket. He swallowed half of its contents; the remaining quantity was taken from him. It was found to be pure chloral hydrate crystallized, and weighed sixty grains. This was all that was left from the ounce; consequently he must have swallowed seven drachms in all. The last dose of about a drachm again caused unconsciousness, which lasted about four hours. The pulse was very feeble and compressible; the extremities were not cold. The symptoms were the same in character, although not nearly so marked, as on the day before.

Gentlemen, we have here a case of chloral-poisoning. Let us examine into his present state, and I will then make some remarks upon chloral and cases of poisoning by it. His pulse is still feeble, though stronger than it has been. It is now ninety in the minute. The heart-sounds also are much stronger than they were, but the first is still comparatively weak, though nothing like the feeble heart-sounds (particularly the first sound) which were observed on admission. His pupils are not so much dilated as they were, but the slight inequality noticed before persists: this may be natural to him. The urine was examined again yesterday, but it contained no albumen and no sugar; it is passed in sufficient quantity. The sensation in his hands has returned perfectly, and he is beginning to suffer again with rheumatic pains. Let us test the tendon reflex. This I find to be very good at the knee, so that this also has come back. Except in one respect,—the weakness of the circulation,—he shows no longer any evidences of his recent experience. His tongue, however, is still very much coated. Since yesterday he has been taking tincture of gentian and nux vomica; his diet has been regulated, and the bowels have been kept open by purgatives when needed.

How did we know that this man had been drinking on the day of admission? We tested the urine for alcohol by a test adapted by Dr. Woodbury: it is a modification of Ainstie's test. Into a tube containing a gram of white sulphuric acid pour twice as much of the urine to be tested, so as to overlay the acid. Now drop in a small clean crystal of potassium bichromate, and slowly mix the liquids by rotary motion of the test-tube. If alcohol is present in proportion as large as two or three parts per thousand, a permanent green discoloration of the liquids will result; if there is less than this, the liquids will remain of a ruby color. I might add that Dr. Woodbury informs me that the presence of chloral in the urine will not produce this peculiar reaction. There was very little alcohol found in this case, and I merely mention it in passing; the real point of interest is the chloral-poisoning.

Now, this man, you recall, took fully seven drachms of chloral. He presented the typical symptoms: unconsciousness, relaxed muscles, extremely feeble pulse, and weakened heart-sounds. The pupils were at first contracted, afterwards dilated, but always sluggish; there was a disappearance of the reflex tendon phenomena. He had, in fact, all those symptoms which are peculiar to a case of chloral-poisoning except one: he had not what has been spoken of by some authors as commonly accompanying such cases,—he had no sugar in his urine.

What are the remedies to be employed in acute chloral-poisoning? They are especially those designed (1) to sustain the action of the heart, such as ammonia and brandy; (2) to keep up the breathing by artificial respiration, if needed; (3) to keep the patient warm; and (4) to use electricity as a cutaneous stimulant. Thus far you would treat a case as an ordinary one of narcotic poisoning. But is there any remedy that will counteract the depressing effects of the chloral upon the nervous centres, and particularly the respiratory centre? Yes; the remedy for this purpose is strychnia, which antagonizes the chloral. It may be used as we gave it here, hypodermically, one-sixtieth of a grain every three hours at first; and it would have been given oftener, but it was not needed. Strychnia, therefore, is indicated as the physiological antidote: it stimulates the centres which have been depressed by the chloral. When recovery takes place, it is usually rapid.

A few words on the subject of chronic

chloral-poisoning may be of interest in connection with the case before you and the remarks which have just been made.

Since the introduction of this valuable but seductive remedy, the people have gradually learned that chloral produces sleep and relieves the condition of "nervousness" or restlessness that is so commonly a cause of insomnia, and they now resort to it just as they do to opium to get relief from any inconvenience. In this way they form a chloral habit that may be as injurious as the opium habit. Chloral, when it is thus taken for a length of time in ordinary or small doses, will give rise to peculiar symptoms, which you should be able to recognize. These symptoms, as you may infer from the acute case before you, are principally those indicating disorder of the nervous system and the circulatory apparatus. As these features are peculiar and of general interest, I will discuss a few of them with you. First, let us consider this question: Can a man become habituated to the use of chloral as he may to the use of morphia?

Take our case for an illustration. This man had used it during his sickness, and had since continued its use, but, as he has told us, he required constantly increasing doses. Is this the rule? There is a good deal of difference of opinion among observers, and, I think, a great deal of difference, in this regard, in individuals. It has been my experience to find in some people great susceptibility to chloral, which does not pass away. Some persons are always affected by small doses, while others require the amount given to be increased in order to keep up the effect, until enormous doses are used. One case I recall,—that of a gentleman who, during some temporary sickness, was ordered chloral by his physician in doses of twenty grains once or twice during the night. He took it, and obtained much relief. The physician discontinued his visits, and, indeed, forgot about the remedy he had administered. About six months afterwards he was again called to see the case, and was astonished to find his patient suffering with all the symptoms of delirium tremens. It was difficult for him to account for the delirium tremens, for the patient was not of intemperate habits, and had not been for years. Upon searching for the cause of this unfortunate condition, it was learned that the gentleman, partly through carelessness and partly from a desire to sleep pleasantly, had been accustomed to use the remedy every night in order to relieve restlessness and produce sleep; but, instead of confining himself to the prescribed dose, he had increased it until he was taking from eight to twelve times the quantity ordered. Under proper care, however, he rapidly recovered. This case, as I told you, wound up as a typical case of delirium tremens, and it answers the question: in some persons the system becomes habituated to the use of larger and larger doses of chloral, the smaller doses failing to produce the desired effects.

Among the more striking features of chronic chloralism is muscular weakness; this is particularly manifested in the legs. There is such marked debility that in attempting to walk the patient appears to be paralyzed. There is no special group of muscles that is affected, but there is a general loss of power in the limbs; this paresis may manifest itself also in the upper extremities. As regards other symptoms, there are some in connection with the circulation and nervous system which deserve discussion. There is feeble action of the heart, with cold extremities and a tendency to profuse sweating; the pulse is accelerated, but weak; arterial tension is reduced.

The nervous phenomena are very remarkable. The active delirium, like that of alcohol, has been mentioned; but there is also a less marked condition of the mind, which is even more significant. The patient becomes constantly dull, dreamy; the will-power seems completely wanting; the judgment and intellectual faculties are impaired. The vaso-motor centres lose to a certain extent their functional powers; this is partly shown by the condition of the cutaneous circulation; the extremities become cold and blue; there is also a strange tendency to cutaneous eruptions. I have noticed erythematous blushes come and go with great rapidity. I have also seen papular eruptions, more or less red and itching, not always the same. Therefore, in addition to the alteration in secretions, the perspiration already referred to, we may have various inflammations of the skin as a result of chronic chloral-poisoning. I have already mentioned the fact that sugar may appear in the urine, although it is not constant; at

least I cannot say that I have found it so. In some cases the bodily nutrition is well maintained and the appetite remains good; the contrary is the case in others. The digestion is not materially influenced, except that there may be relaxation of the bowels, in place of the constipation accompanying opium and its preparations.

What should be the treatment of chronic chloral cases? Suppose that a patient like this says that the habit is growing upon him, and comes to you for advice, what course would you pursue? I would answer that you must reduce the dose gradually. As large doses of chloral are only given exceptionally, there will be less difficulty on this score than with opium; but as you reduce it I would strongly advise you to give strychnia or nux vomica, for its effects on the nervous system; it antagonizes the effects of the chloral and acts as a tonic at the same time. Those nervous centres which are reduced in their activity by the paralyzing effects of the chloral are stimulated by strychnia. If you use strychnia you may stop the chloral almost at once, without any bad effects being observed. I had a case in point last summer. A gentleman who had been taking chloral for some time found himself very weak, his will-power impaired, and he felt miserable. He determined to stop off entirely. He went to Atlantic City without a single grain of chloral. He took constant out-door exercise. He was sleepless for a time, but he was able to overcome his evil habit, and, although he had been using chloral regularly for eighteen months, he recovered entirely. It should be stated, however, that while giving up the chloral habit he took from time to time strychnia or nux vomica.

ORIGINAL COMMUNICATIONS.

ANIMAL VACCINE VIRUS COMPARED WITH HUMANIZED LYMPH.

BY HUGO ENGEL, M.D.,

Philadelphia.

OF late a number of vaccine farms have been established all over our country, which proves that there is an increasing demand for animal vaccine lymph. It is therefore important to know more about the manner in which this lymph is collected, the different procedures employed, and the relative value of the two varieties of lymph now mainly used in vaccination. Dr. L. Lemmer, of Alford, has published "a critical study" of this subject:* as it contains a great deal of interesting information concerning animal and humanized lymph, I have made the following abstract of his article.

The results so far gained with animal vaccination are decidedly varying, according to the method of its employment: none, thus far, has answered all demands, and this may be one of the reasons why so many different processes are used. Not only the lymph, which oozes out by itself, but the whole substance of the pustule, even the latter together with its base, have been taken from the animal for the purpose of gaining the lymph. And here it answers the same purpose, as regards success and possible value, if the pustule is taken hold of with the forceps and then the pure lymph or the pustular mass is used for vaccination (Dutch method), or if the pustule is cut off with its base and either turned over the finger or nailed on to a board (Neapolitan method of Negri).

The success is almost a perfect one. In Rotterdam (Dutch or Holland method), for instance, for the year 1876, 99.3 per cent. success of vaccination; 1877, 99.8 per cent., and each time in average 8½ pustules from 10 cuts; in Amsterdam, for the year 1878, 100 per cent. success are reported, and $8^{1}/_{5}$ pustules in average from 10 cuts; in 1877, only $7^{2}/_{3}$. Frequently, however, these figures indicate only the final results after repeated vaccination. Voigt, in Hamburg, for instance, had in primary vaccination 94.1 per cent., in revaccination 75.2 per cent.; but by one to three revaccinations he increased the latter percentage to 98.8 per cent. and 84.3 per cent. respectively. One heifer is good for one hundred to one hundred and twenty vaccinations,—according to Voigt only for about seventy; a cow, according to Pfeiffer, only for sixty-three. It may be mentioned that rarely or never is such an animal exhausted perfectly (regarding the amount of lymph gained from it) for direct vaccination; most of the lymph is usually employed for the purpose of being sent away to

* Vierteljahrsschr. f. gericht. Med., Bd. xxxvi. H. 2, 1882.

persons living at a distance, so that really direct vaccination happens rarely.

For the conservation of animal lymph the process of thoroughly drying the same has always been the main object. The pure lymph, which sticks to the lancets, etc., used in vaccinating the animals, and then dries, can always be employed for revaccination; and the same may be done with a lancet with which a human being has been vaccinated. If allowed to dry without being cleansed, the lymph on it will suffice for vaccinating a cow.

The drying of the pustular substance after having been scraped off the animal is especially practised by Reissner in Darmstadt, who has many imitators in this country: he rubs to powder-form the pustules of one or more heifers, and to diminish the too intensive action of such pustules he adds older and recently-dried pustular mass together. This loses within the first eighteen days but very little of its effect. With this powder are given small flat pieces of ivory, in which are cut three or four fine slits. When vaccination is to be practised, the necessary quantity of the powder is moistened with a little glycerin and water and pushed into the slits; or—the more usual manner—several fine cuts are made into the skin just below the insertion of the deltoid of the person to be vaccinated, and the moistened powder is worked into the cuts with the flat side of the lancet, or with an ivory rod. Reissner had during 1882 98.9 per cent. personal success in vaccinations, and 92.6 per cent. in revaccinations. From two to three vaccinations may be made from one pustule; but Reissner intends to institute a series of experiments by which, through the addition of some indifferent vegetable or mineral powder to the vaccine powder, the latter may be increased in quantity capable of serving for more than three vaccinations without losing in effect.

Several years ago Dr. Frappoli dried the pustule, which was cut out with its base, by the aid of the pneumatic machine: vaccine lymph so treated, and preserved for a period of four years, was employed by him and others with perfect success in vaccination. Dr. Margotta, in Naples, reduced the dried pustule to powder, and found that the effect of the latter was preserved several months later.

The conservation and mailing of the pure lymph in fluid form in homœopathic glasses, in small reaction-tubes, in quills, between two pieces of glass, and in capillary vessels, has been frequently practised. The results, however, have nowhere been satisfactory: the general complaint has been that the fluid lymph loses its effect too rapidly. The writer of this had occasion to convince himself of the truth of this assertion.

The conservation of the whole pustular mass in the same condition as it is taken from the heifer has been attempted in Italy, Belgium, Holland, Germany, and in our country,—especially, however, in Hamburg, where it is spread upon glass, a second piece of glass is laid over it, and the edges are hermetically closed with paraffin lac or plaster of Paris. Belluzi, of Bologna, adds to every pustule one drop of glycerin, and of his two pieces of glass one is excavated. His mass is said to be effective for three or four weeks; in Hamburg it lost the effect often after one week, though it answered for three to five months longer for the vaccination of heifers.

The latest method, however, is the one recently published by Pissin, of Berlin. He scrapes the pustular mass off its base, and puts it in a watch-glass which for eight to ten pustules contains six drops of glycerin and six drops of a one-half-per-cent. salicyl-water; then he mixes the whole thoroughly, permits it to stand for several hours, and pours afterwards the clear glycerin solution into several large capillary glasses. From the last heifer, which had been vaccinated in December, four hundred and seventy small capillary tubes full of this lymph were obtained; from the one before the last, three hundred and fifty; they average three hundred, and each tube suffices for one to two vaccinations. So far it has been proved that this lymph retains its full effect for longer than three weeks. Pissin intends to make further experiments, adding a larger percentage of different disinfectants, to determine to what point of dilution he might go without detrimental influence on the effect of the lymph, and how far he may proceed with the addition of disinfectants to preserve the effect of the lymph as long as possible without weakening the same.

Pissin gained in vaccinations performed either by himself or under his direction very good results,—viz., 98 per cent. in

primary cases, and 97.3 per cent. in re-vaccinations; while the results achieved with lymph which by him was mailed to distant places showed 86.8 per cent. in primary cases and 59.3 per cent. in re-vaccinations. Pissin himself explains this discrepancy by supposing that some physicians either did not pay strict enough attention to the technique of the operation or used lymph rather old.

To judge from the results gained with this new method, Lemmer recommends to disregard direct vaccination from the heifer. In reality, animal lymph should not be used till the slaughtering of the animal has given proof that the latter was perfectly healthy, to meet the objection that possibly also by animal lymph diseases, as tubercles, etc., may be transferred to the vaccinated human being.*

Those methods are less valuable by which the fluid vaccine lymph alone is taken from the animal, as this is neither so effective nor can it be kept for so long a time as the whole pustular mass, and the latter can be more thoroughly exhausted. Totally to be discarded are all methods by which the pustule is taken from the animal together with its base, as by such a procedure the animals unnecessarily suffer a lesion, pieces of the cutis being in reality cut away, which are of no effect whatever in vaccination, but may be under circumstances dangerous even. The pustular mass scraped off must in its natural state also be considered as not suitable, since it is impossible to keep it for any length of time without its losing all effect.

Useful methods are, according to Lemmer, the following only: the vaccine powder prepared after Reissner, the Mailand paste, and the glycerin solution after Pissin. These three, however, do not possess equal value. Reissner's powder is connected with too much trouble and difficulty in vaccinating with the same, and, on account of the minute size of a dose, is not adapted for retail trade. It has also not been proved as yet that it will keep a sufficient length of time; and, lastly, the whole material is not so perfectly exhausted as is the case with Pissin's glycerin solution, where there is no waste. The Italian method, known by the name of Mailand paste, is said to be very effective and to keep a long time, can easily be employed and the material totally exhausted; but, except in Italy, where now for some years past the reports regarding it coming from many different sources have been exceedingly favorable, this same good result with the same vaccine matter has not been met with in any other country, which at least seems to show that the Mailand paste is not adapted for export.

In order that lymph shall answer its purpose in every way, it must fulfil the following conditions: (*a*) it should at any time be obtainable in sufficient quantities; (*b*) it should be reliable in its action, and retain this effect until totally used up, and be adapted for export or for sending to distant localities; (*c*) easily to be applied, and perfectly exhaustible without waste; (*d*) free of danger and innocuous regarding its application and effect; (*e*) possess a protective power against variola for as long a period as possible; (*f*) permit its being collected in an easy manner, and to serve as an article of trade, like other drugs; and (*g*) it should be as cheap as possible.

Animal lymph is the only one which, if prepared and collected, preserved and applied, *lege artis*, will fulfil all these expectations.

Humanized lymph is superior in one respect only to animal lymph; it retains its full effect for a longer time than the latter; but the animal virus, especially the glycerin solution of Pissin, accomplishes to-day also in this direction everything which we practically can demand from it. In every other respect, animal lymph is either of equal value or superior to humanized virus; the former alone is adapted for a trade in vaccine matter, as in it alone we can receive a full guarantee against any detrimental and injurious effect of the virus itself. The fact that humanized lymph could always be procured cheaper is no obstacle to the employment of the animal lymph, if we consider the guarantee mentioned; and, besides, animal virus may now be sold

* It is well known that vaccinating a heifer with human smallpox lymph, while causing the pustular eruption, has no influence whatever on the general health of the heifer, and after the pustules have fallen off and the skin has reassumed its normal appearance, the flesh of such animal after the latter has been slaughtered is in as good a condition as it was before the vaccination. This is such a well-established fact that in Prussia there is no law forbidding the sale of such meat. For pecuniary reasons, healthy heifers destined to be slaughtered should be selected for this vaccination, and, as this procedure is equivalent to an income of about seventy dollars (three hundred capillary tubes at twenty-five cents), such an enterprise should be a paying one.

even cheaper than the former. The protective power of vaccination against variola as regards length of time and degree, as well as its dependence upon the kind of lymph employed, is a problem not as yet solved: to decide this question, a thorough reform of statistics in conjunction with the medical profession and public sanitary boards, and of experiments, would first be necessary.

It is the duty of the government to see that preventive measures are taken against epidemic and contagious diseases, that compulsory vaccination is correctly performed, and that the best virus is obtained and placed for such purposes at the disposal of the medical profession.

507 FRANKLIN STREET.

A CASE OF PYÆMIA EXTENDING OVER A PERIOD OF SIX MONTHS, WITH RECOVERY.

BY ROBERT KILDUFFE, M.D.

Presented by Dr. O'Hara at the Clinical Meeting of the Philadelphia County Medical Society, February 21, 1883.

J. B. M., aged 17, occupation clerk, on July 25, 1881, bruised the index finger of his right hand in handling a case of goods weighing eighty pounds.

He continued at work for two days, although suffering great pain, the finger being red and swollen. On the 27th of July it was punctured by his employer with his penknife, the blade of which had been in ordinary use: only a few drops of blood were lost, and this afforded him but little relief.

On July 28, he consulted Dr. Kilduffe. The finger was found to be very much swollen, and tender; but slight discoloration, and no sign of suppuration. His general condition was good.

Iodine was used locally, a splint applied, and a purge given. He returned to work on the 29th, against the doctor's advice, but was compelled to go to bed on the 30th.

On the 31st he came to the doctor's office, complaining of headache and intense pain in finger; tongue heavily coated; high pulse; temperature, 100°. He was ordered to bed, and finger poulticed. These orders were not thoroughly carried out, the patient insisting on returning to work, and upon being summoned, two days later, the doctor found a violent cellulitis extending from the index and second finger up the wrist and arm, with great tension and pain. Temperature, 101°; pulse, 140.

On August 3, Dr. M. O'Hara was called in consultation, and continued thereafter throughout the case. A free incision was made in the finger, followed by no discharge of pus, and affording but little relief.

The second phalangeal joint of the second finger was much swollen, and suggested the possibility of pyæmic arthritis at its metacarpal extremity. Two days after, owing to the critical condition of the patient, Dr. Willard was called in consultation. A crucial incision was made in the palm of the hand, and the second finger was laid open to the bone.

During the following two weeks, six abscesses formed and were evacuated on the anterior and posterior surface of the arm and about the joint, but not involving it, although the joint itself was inflamed.

The whole hand at this time seemed to be dead, and no amount of poulticing or stimulating injections could induce the tissues to take on a healthy action. Amputation was dreaded, or at best a stiff hand with contracted fingers.

Orchitis on both sides now supervened, which yielded to appropriate treatment, to be followed by a low grade of pneumonia of the left lung. There were no certain manifestations of pyæmic deposit, though minute foci of pus were suspected.

Enlargement of the liver, with free jaundice, occurred next, which disappeared in about ten days. Then dysentery set in, accompanied by bloody and purulent stools.

All this time new abscesses were forming and reforming in the arm, as fast as opened, the pus burrowing in the intermuscular septa between the superficial layer of muscles.

The kidneys were next attacked; nephritis set in, and blood and pus appeared freely in the urine.

Dr. Garretson was now called in consultation. Within the next three weeks an abscess formed in the neighborhood of the left elbow-joint, and was opened.

Then there was retention of urine; a catheter was passed once, but the patient, worn out with pain and agony, refused to again allow its use.

Incontinence followed this retention. The assigned cause for this was a probable formation of pus around the neck of the bladder or the prostate gland.

An abscess now pointing in the perineum, it was opened a little to the left of the raphé between the crura, the knife being directed after the manner of the operation for median lithotomy, and pus and urine discharged freely. The urinary fistula remained open, and a flexible catheter was retained for about six weeks, at the end of which time the urine passed by the urethra.

The second phalangeal joint of the second finger being totally disorganized, amputation was performed. Four months' fighting of the constitution with pyæmia had reduced the patient to an almost hopeless state. During the last month he rallied several times from an apparently dying condition.

Opium, quinia, sulphide of calcium, eucalyptol, salicylic and carbolic acids, iron, milk, beef-tea, etc., and four ounces of alcohol diluted, were given daily for weeks together. The temperature throughout was irregular, varying from 100° to 101° during most of the time; formation of pus was heralded by a temperature of about 103°, but he never had at any time either rigors or sweats, which so commonly attend pyæmic manifestations.

Notwithstanding the stimulating treatment, his exhaustion was progressive, and for some weeks he remained in a moribund condition.

It was thought that he could not survive any further evolution of the poison in his blood. He rallied very slightly, and about the end of November a new abscess formed under the spine of the right scapula, being preceded by wandering myalgia on the right side of the chest. It was opened, and in a couple of days another one formed, a little below the first and communicating with the axilla. The upper one was healing, when suddenly blood was found oozing from it, and there was apparent communication with the lower cavity, as shown by its rapid distention in a few hours, and still further by the new symptoms of the patient, which were those of loss of blood.

Death was imminent, and in consultation with Drs. O'Hara and Garretson it was deemed imprudent to give him ether, so low was his condition. The two cavities were laid in one by an incision three inches long, and over a pint of clotted blood turned out.

Failing to arrest the hemorrhage by syringing the cavity with hot water, it was packed with strips of muslin, two inches wide and seven yards long, soaked in phénol sodique, a graduated compress applied, and the chest tightly bandaged.

The packing was removed on the third day, and the cavity washed out with eucalyptol. It healed very slowly, continuing to discharge pus for about three weeks, and, from its size and depth, a series of graduated compresses were required to prevent its accumulation.

This cavity seemed to be a sloughing of all the connective tissue from the axilla to the sternum, and between the trapezius and latissimus dorsi, on the back, and the pectoralis major and minor and serratus magnus muscles in front.

This was the last attack. The patient very gradually regained his strength, and at the end of a six months' fight appeared to be reconstructed as to the condition of his blood.

We present him to you this evening as a sound, healthy young man, although he bears on his person twenty-three scars of the surgeon's knife.

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CASES ILLUSTRATING SOME FORMS OF INJURIES TO THE ARM RESULTING FROM MUSCULAR VIOLENCE.

BY WILLIAM BARTON HOPKINS, M.D.,

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RUPTURE OF THE TENDON OF THE LONG HEAD OF THE BICEPS.

A. F., æt. 55, a muscular man, applied to the Episcopal Hospital, January 9, 1883, for the relief of rheumatic pain in the right shoulder-joint, which had given him occasional annoyance for several months. While an examination of the shoulder was being made, a curious deformity of the arm was observed, which, on being questioned, he gave the following account of. Five weeks before his appearance at the hospital, while rolling a barrel of paint upon the scales, he lost control of it for a moment. He was caught, hand and elbow, between the barrel and the wall. To extricate himself, he made a violent effort to resist the movement of the falling barrel by bending his elbow, when he felt something suddenly snap in his arm. Although at first he experienced some pain and partial loss of power in the arm, he was disabled for a very short time only, and paid but little attention to the accident.

The deformity consisted in an altered shape and position and apparent increase in size of

the biceps muscle. All these conditions became exaggerated when the muscle was contracted and the forearm flexed at a right angle with the arm. The description of the deformity (which is well shown in the accompanying illustration) will therefore be made of the limb in this posture.

The mass of muscle stood out prominently. Its upper border, irregular in outline and

somewhat nodular, terminated abruptly in the depression which exists just below the inferior margin of the deltoid. The hard, nodulated condition at this point was evidently caused by the contraction of unresisted muscular fibres upon themselves and on their tendinous coverings. The position of the muscle was changed, being below the middle of the arm rather than slightly above, as in health. The tendon of the short head could be clearly traced almost up to its origin at the coracoid process of the scapula, while that of the long head could not be felt to react at all beneath the fingers during forcible flexion and extension of the forearm, as it ordinarily can be. To the integrity of the short head is to be attributed the usefulness of the limb. The pain complained of in the shoulder seemed to have no connection with the injury, as it was no worse after than before the accident, and as other joints had been similarly affected.

No treatment was employed for the ruptured tendon.

THREE CASES OF FRACTURE OF THE HUMERUS FROM MUSCULAR ACTION.

Case I.—A. B., æt. 30, policeman, a large, powerful man, in perfect general health, applied to Pennsylvania Hospital, July 27, 1882, having sustained a fracture of the right humerus at its middle third from throwing a base-ball *overhand*, not as in a case recently reported by Dr. James Collins, where fracture of the humerus was caused by *underhand throwing*, or "pitching." The arm was placed upon an internal rectangular splint, a cardboard cap extending from the shoulder to the elbow was applied, and the arm retained to the side of the body by spiral turns of a bandage. Early in the second week, the dressing having been reapplied probably three times, the patient remained away from the hospital for nearly three weeks. When he returned he explained his absence by saying that he did not think it necessary to come back until the bandages became disarranged. Firm union had, however, taken place, and there was practically no deformity. Good motion existed in the adjacent joints, and he was very soon discharged cured.

Case II.—O. K., æt. 35, a very powerful colored man, applied to Pennsylvania Hospital, August 28, 1882, with a fracture of the humerus at the middle third, induced by muscular violence. During an altercation he directed a hard blow with his fist at another man. He missed his mark, and the arm fell powerless at his side. The broken fragments of the bone were brought readily into proper position, and the case was treated in a similar manner to the one just described. He also made a good recovery.

Case III.—R. E., æt. 55, a stout woman, in moderate health, applied to Pennsylvania Hospital, November 27, 1882, suffering from an injury about the right shoulder of seven weeks' standing. While in the act of carrying, with the assistance of another person, a large wash-tub full of clothes and water from the kitchen to the yard, she gave her arm a wrench in descending the step. A violent crack was felt and heard, accompanied by severe pain in the shoulder and complete loss of power in the arm. She called no one to attend her, and remained helpless for some time. Finally, however, she began to use the forearm and hand a little, but, as the arm remained useless and gave her a good deal of pain, she, at the end of seven weeks, applied to the hospital for relief.

The symptoms pointed to fracture of the humerus, probably through the anatomical neck, and possibly within the limits of the capsular ligament. Crepitus could be felt high up over the head of the bone,—crepitus which was sharp in character, little modified by absorption or deposition of callus, and only occasionally to be elicited. No repair had taken place, therefore, and, as the patient had noticed the crepitation herself ever since the occurrence of the injury, it could not have depended upon either a bursitis or an arthritis of the shoulder. An accurate diagnosis, however, was impracticable, both on account of the age of the injury and the quantity of fat which covered the shoulder.

The treatment consisted in the application

of a cardboard shoulder-cap and the retention of the arm to the side of the body. Improvement in this case, as would be expected, was very slow.

In recording the foregoing cases, a few remarks based upon an analysis of the laws of mechanics governing the action of levers in their relation to muscular strain may not be out of place. For, although these laws and their application to the power of muscles and movement of bones are facts familiarly known to every one, their special significance to the subject under consideration may have escaped the attention of some.

When the forearm is flexed at the elbow-joint by the contraction of the muscles of the arm, the lower end of the humerus acts as the fulcrum, the biceps and brachial muscles the power, and the hand, with whatever it may grasp, the weight. The forearm is, in other words, a lever of the third kind. In such the power must always be greater than the weight, technically expressed by the phrase "mechanical disadvantage." The amount of mechanical disadvantage to which the muscles of the arm are put to raise a known weight placed in the hand is computed by multiplying the weight to be raised by its distance from the fulcrum and dividing the product by the distance of the power from the fulcrum.

The following measurements were taken from the bones of a well-developed male skeleton: from the bottom of the sigmoid cavities of the ulna to the metacarpo-phalangeal articulation of the middle finger, fourteen inches, and from the same point to the tuberosity of the radius, two inches. (For convenience in computation, the attachment of the biceps alone will be used, as it is the more important flexor muscle, and as it presents less mechanical disadvantage than the brachial.) The power, then, in this lever is to the weight as seven to one. If, therefore, a weight of one hundred and fifty pounds is raised in the hand by flexing the forearm, the power exerted by the muscles in executing this movement is represented thus: $\frac{14 \times 150}{2} = 1050$ pounds, —a force well calculated to part a tendon or break a bone.

The fact that the forearm cannot be extended with as much force as it can be flexed, though with greater velocity, of course depends upon the difference in distance between the power and the fulcrum in the two cases. For in the same specimen the distance from the point of insertion of the tendon of the triceps in the olecranon to a point opposite the bottom of the sigmoid cavities of the ulna was found to be only half an inch. The power, then, in this lever is to the weight as twenty-eight to one. Therefore, when a sixty-pound dumb-bell is put up from the shoulder, the force exerted by the triceps muscle is shown thus: $\frac{14 \times 60}{\frac{1}{2}} = 1680$ pounds, or 630 pounds more force than is required to raise 150 pounds by flexion.

HERPES ZOSTER.

BY HENRY M. WETHERILL, JR., M.D.

WITHIN the past six months of my residence in the Insane Department of the Pennsylvania Hospital, I have had under my care two cases of herpes zoster, occurring upon the persons of two of our inmates, neither of whom, however, was insane. The first case was that of one of our hospital attendants, and was caused probably by his taking cold. There was nothing remarkable in the situation of the disease in this instance; but the intensity of the local ulceration, and the gravity of the accompanying constitutional condition, render it worthy of notice. The patient, a stout, hearty man, aged 46 years, was of a very nervous temperament. Forty-eight hours preceding the first appearance of vesicles, he complained of pain and a feeling of stiffness in his right side, which was much increased upon his taking a deep inspiration. Pleurisy was suspected, but its absence was ascertained by physical exploration. When the vesicles appeared, they occupied the tracts of the intercostal nerves, showing all their ramifications and twigs from the fourth to the tenth rib, thus making a patch involved in the disease about eight inches in width, and extending from the spine behind to the median line in front. After the second day of the eruption, large bullæ formed, some of which were filled with pus; there were also a few true pustules. By the sixth day the vesicles and bullæ had collapsed; but now the temperature of the patient rose to 103° F., and extensive sloughing of all of the invaded skin followed, until the side presented the appearance of a deep burn. The pain was intense, and the patient obtained

scarcely any sleep for several days and nights, although morphia was exhibited freely. High temperature, with exhaustion from pain, brought on slight muttering delirium at night. This condition lasted for five days; but the healing of this immense denuded surface progressed very slowly. He was in bed about twelve days, and confined to his room as many more. Deep and probably permanent cicatrices, with reddish-brown pigmentation of the skin, followed. There was a feeling of stiffness, with occasional twinges of neuralgic pain, felt for several weeks after convalescence. Upon examining the urine, it was found to be alkaline and to contain triple phosphate in excess; but after febrile action became excessive the urine became scanty, acid, and contained oxalates in excess, while the triple phosphate diminished in amount. The patient passed large quantities of pale, alkaline urine daily for two weeks after the temperature became normal. No albumen was found at any time. In the *Journal of Cutaneous Medicine*, vol. iv. p. 158, Erasmus Wilson cites a case in which this disease appeared in five distinct, separate tracks around the hemicycle of the trunk between the clavicle and the groin, occurring in the person of a gentleman who had been the subject of eczema for twenty years. This case might be called discrete, in contradistinction to my case, which was confluent, flaying a large section of skin from the patient and putting his very existence in jeopardy. Hebra states that severe ulceration followed by cicatrization is quite rare; that it is also rare for much neuralgic pain to precede, accompany, or follow an attack; and Rayer states that extensive sloughing of integument with grave constitutional symptoms is unusual except when the disease attacks the aged or infirm. It is always spoken of as an acute affection, and some author makes the remark that one has it only once in a lifetime. Lorry and Alibert admit the existence of a chronic form, and Buserius quotes a case. Rayer, Willan, Anderson, Fox, Hebra, and many more authorities have not encountered the disease in this form. The result of much research shows that one side of the body is about as often invaded as the other. Erasmus Wilson says that both sides of the trunk have been affected at the same time, but not at opposite points, so as to form a zona. This condition is extremely rare.

The other case referred to as having come under my observation lately was that of a gentleman of middle age, one of our voluntary inmates, of rather nervous organization, who has been and now is subject to severe attacks of neuralgia of the fifth pair. His attack was curious on account of the locality invaded and of the uncertainty of its causation. The groups of vesicles appeared over and mapped out the distribution of the lumbar plexus of nerves of the right side as follows: starting over the spine in the lumbar region, a line of patches of vesicles upon a dark-red ground followed the crest of the ilium and downward into the groin to the right side of the scrotum; another line ran down the right gluteal region; while between these two another line passed around the hip to the outer side of the thigh, branching about four inches above the knee, one branch running to the outer, the other to the inner side of the joint. The disease did not extend below the knee. The line of vesicles upon the thigh, assuming an almost perpendicular direction, should be classed under that subdivision of herpes zoster named by Bateman herpes proserpens,—*i.e.*, "creeping along." The penis was not involved. The distribution of the anterior crural nerve upon the front of the thigh was not invaded. The disease on all the surface indicated was very well marked, although the attack was not very severe, nor was it preceded, accompanied, or followed by neuralgic pains. The condition of the patient demanded no active treatment. I am rather uncertain as to what could have caused this attack, as all of the ordinary causes mentioned by the authorities had to be ruled out on account of the general health of the patient at the time, and of the good hygienic condition of the house. The patient has always been very susceptible to the emanations of drying paint, and was once made quite ill from continuing his business in an office which was being re-painted. About a week prior to the commencement of the attack of herpes, a large room in the same ward had been consigned to the painters, and he is sure that the attack was caused by his breathing an atmosphere tainted by the smell of paint. This will have to stand as a reason in default of a better one. Anderson Fox cites a case in which herpes zoster occurred as a complication of acute gastric catarrh; and Z. facialis has accompanied intermit-

tent fever and pneumonia. The usual remedies are well known. It is well to avoid all greasy applications, as they seem to increase the patient's discomfort without modifying the disease. I have seen eight cases of herpes zoster, five of which were the ordinary Z. pectoralis, one was a case of Z. pectoralis in which the intercosto-humeral nerve was affected, causing the vesicles to appear upon the inner aspect of the arm, one of Z. occipito-collaris following the distribution of the cervical nerves, and one involving the lumbar nerves.

A SEBACEOUS CYST CONTAINING A COIL OF HAIR CONSISTING OF TWO HAIRS, EACH SEVERAL INCHES IN LENGTH.

BY H. W. STELWAGON, M.D.,

Physician-in-Charge at the Philadelphia Dispensary for Skin Diseases; Physician-in-Charge of Service for Diseases of the Skin, Northern Dispensary; one of the Attending Physicians to the Department for Diseases of the Skin, Howard Hospital.

SEBACEOUS cysts containing fragments of hair are, it is true, not uncommon. Such cases have from time to time received passing notice from different observers, and are also incidentally mentioned in almost every text-book which treats of these tumors. Examples of this kind have come under my personal observation in the past few years. The hairs in these instances are usually found to be small and atrophied. The case under immediate notice was in this particular, however, decidedly curious, if not extraordinary. The cyst occurred in a medical gentleman, and the history of the case may be briefly sketched as follows:

About two years ago, in casually scratching the face, he noticed a small nodule at the point where the facial artery crosses the jaw. It appeared simply as a small indurated acne papule. As the parts were covered with a beard, and as the nodule consequently could not be seen, the attention given it was merely accidental. After a few months it grew somewhat larger and became slightly inflamed. On squeezing it, a cheesy substance was discharged. It then returned to its former condition, except that it was a trifle larger. It continued in a quiescent state for a few months, and then went through the same phases as before, becoming inflamed, enlarged, and on pressure discharging sebaceous matter. Thus it continued, at longer or shorter intervals, for a period of eighteen months, giving but little trouble, except when inflamed, and even then the annoyance was trifling. At the end of this period the tumor was about as large as a medium-sized pea, and very little above the level of the skin. About this time the gentleman shaved off his beard. The cyst immediately began to grow rapidly larger, and could be seen as an elevation with a small central depressed aperture, discharging at frequent intervals. The gentleman introduced a pointed stick of nitrate of silver into the opening, and endeavored to cauterize it. Considerable inflammation ensued, and from a fourth to a half ounce of pus was discharged daily. The tumor was now about the size of a small marble, with considerable surrounding inflammation. After the inflammation had subsided somewhat, and about six months after the shaving off of the beard, the cyst was excised by Dr. Ashhurst, of the University. The sac was bound down to the parts, so that in removal it was necessary to take away some of the surrounding tissues. The cyst was subsequently opened, and, in addition to small quantities of sebum and pus, was found to contain a coil of hair, apparently made up of one hair, eleven or twelve inches in length. On lengthening it out for the purpose of obtaining measurement, the coil was found to consist of two hairs, one six inches in length and the other four inches and a half. The hairs were unattached.

The history of the case from the beginning is that of a simple discharging sebaceous tumor, becoming at times inflamed by the accumulated sebum. The interest, of course, centres in the coil of hair and the solution of its presence there. The coil into which these hairs were wound was of the diameter of a little less than a quarter of an inch, and appeared as if it had been made with the greatest care. As stated above, there was no attachment found, although the force necessary to enucleate would doubtless have severed any connection had such existed. It is rational to suppose that the hairs began to grow in the sac and coil themselves just after the shaving off of the beard. That such could not have taken place before this is shown by the small size of the cyst up to that time. After the shaving it is probable that the cyst, growing rapidly in size by extending at its circumference, carried in its under wall the hair-follicles with their enclosed bulbs. The hairs growing struck against the upper wall, and, being unable to penetrate, were reflected, and in that manner gradually wound themselves into the coil that was found enclosed. The hairs were good and strong and in no way

atrophied, and appeared as if broken off near the roots. It is, moreover, probable that they were attached and growing up to the time of enucleation. This is rendered more likely by the fact that the hairs were of considerable length, and must necessarily have been growing several months,—fully as long as the time that elapsed between the shaving off of the beard and the excision of the tumor.

A SLOUGHING ULCER PERFORMING A VICARIOUS FUNCTION.

BY P. HOOPER, A.M., M.D.

E. C. (colored), with a sloughing ulcer on her right leg. Eight and a half years had passed from the time the ulcer first made its appearance after a bruise, to the time I saw the patient. From the time of its appearance, the ulcer was constantly growing worse. Three years after her injury the ulcer began to bleed. The hemorrhage was a vicarious one, taking the place of her periodical sickness. One month she menstruated, the ulcer also performing a part of the menstrual office. The following month the ulcer entirely replaced the uterine discharge, bleeding very copiously. Occasionally the ulcer would replace the uterine discharge for two and sometimes for three successive months. So free was the hemorrhage from the ulcer that, in the words of the patient, her "stocking was soaked, and her foot slopped in the blood." She thought that when she missed her periods the ulcer menstruated more than a quart of blood. These excessive hemorrhages had weakened her very much, and the days upon which she was able to work were becoming less and less.

When I examined the patient, I observed the following symptoms. Pain of an intense nature radiated from the tibia where the ulcer was situated, and was most severe on the side where it originated; it was also more excessive at night, and became almost unbearable when the patient was warm in bed. The hands and soles of the feet were very hot and dry, and the surface of the entire body was parched and feverish. The patient was suffering from severe chronic constipation. The ulcer presented all the appearances of the sloughing ulcer in its worst stages. The surrounding parts were very painful, and the bone was bared and very sensitive. The ulcer nearly encircled the leg, and the discharge from it was extremely offensive. The patient evidently was suffering from periostitis, which had extended to the compact tissue of the bone. The fibrous lymph and leucocytes which had transuded during the inflammatory attacks had undergone ossification over portions of the tibia, enlarging and thickening the bone. The night-sweats and pain were due to specific rheumatism. The nature of the ulcer was syphilitic. On December 26, 1882, the patient was directed to go to bed and keep the leg in an elevated position and perfectly quiet. For the first week the local treatment was flaxseed-meal poultices changed several times daily. Neutral mixture and Hunyádi Janos water were given, also iodide of potash in ten to fifteen grain doses *ter die*.

The neutral mixture and morphia were discontinued after the first week; dilute Labarraque solution was used locally, and afterwards a twenty-grain nitrate-of-silver solution. After the second week adhesive strips were applied daily to the ulcer, and an elastic bandage used. After my patient had been taking the potassium salt for a time, severe ulcerative stomatitis and salivation resulted. The patient had undoubtedly taken large quantities of mercury, which had been stored up in an insoluble condition in the various tissues of the body. The iodide of potash after its absorption had formed a double soluble salt with the mercury, and, as the mercury was rapidly liberated, the ptyalism that resulted was very severe. The tongue was ulcerated and enormously swollen, and a large alveolar abscess formed on the lower jaw. After the first month I still continued to change the adhesive straps, used the tepid water as a wash, and, in addition, applied an ointment of iodoform, benzoated oxide of zinc, and morphia. When the time came for her periodical sickness, the ulcer, which had granulated under the above treatment with great rapidity, put on an angry look; the granulations looked red and inflamed, and considerable blood-stained serum exuded. The foot became enormously swollen, and so hot and painful that the patient had to remove the bandage during my absence. When I came, I renewed the strips, putting them on tightly, and reapplied the roller smoothly and firmly. At the second menstrual period the swelling and the transudation of serum were scarcely noticeable. The ulcer has entirely skinned

over, and the patient is now out of bed and able to be about.

This vicarious function of menstruation from an ulcer has been very rarely met with. Blundell instances the case of a girl in St. Thomas's Hospital, who had a discharge from an ulcer on the hand which replaced a uterine discharge for three successive periods. Ashwell mentions a case in Guy's Hospital; also Dewees, Whitehead, Mason, Boring, and Wiseman, chirurgeon to Charles II., each mention one case. In Boring's case amputation was necessary, the ulcer becoming so large; after amputation, blood-sacs appeared at menstrual periods on the stump.*

3509 North Seventeenth Street.

A CASE OF TRIPLETS.

BY JAMES HENDRIE LLOYD, M.D.

On Tuesday evening, February 27, I was called to see a woman, the history of whose case has some special interest. The city newspapers printed accounts of it, more or less exact, but I have thought that a more detailed and technical report in a medical journal was due to a case which is something of a rarity, even in the history of multiple pregnancy:

Mrs. Kate W., æt. 34, white, multipara, a native of Ireland, called to make a social visit at the house of a friend. She was probably in the eighth month of pregnancy at the time, but had no suspicion whatever that she was carrying more than one child: upon this point the woman's statement is very positive. Late in the afternoon she complained of not being well, but neither she nor her friends appear to have suspected the onset of labor. She was asked to stay all night, which she consented to do. About two o'clock in the morning she went into active labor, and was delivered rapidly of three children, with no physician or skilled nurse to assist her, but with the help of a venerable Irishwoman, who had certainly never seen the like before. From this ancient female and from the patient herself I gathered the following facts. She first expelled a very large clot, so large and firm that she thought it was the child presenting. After labor had lasted about one hour, the first child, a boy, was born living; in fifteen minutes a second living boy came. The old nurse, naturally thinking that these were all, detached the children, and then, grasping the two cords, awaited events. I have no doubt she pulled violently upon the cords. Be that as it may, in another half-hour a still-born girl was expelled, with all the placentæ. Upon this last point—the expulsion of the secundines—very particular questions were asked, to which the nurse answered that she knew the after-births had all come away, because "the three were joined together at their edges, and each had its own navel-string running to it." They had been thrown down a cesspool before I reached the house, some hours after labor. The woman had a good lying-in, and her two babies, although weak and puny, were at last accounts thriving. To avoid medico-legal trouble, the coroner was notified, who removed the dead child, so that I had but little chance to examine it. I could learn nothing reliable about the presentations.

The points of special interest in the case are the ease and rapidity of labor, and the death *in utero* of the third child, in reference to which the query may arise, Could it have been caused by the too early detachment of its placenta, as indicated by the large clot which was first expelled, or by bleeding from the free ends of the two cut cords, supposing an anastomosis of the placentæ? It was also noticeable in this case that the woman had not lived with her husband for two years.

Triple pregnancies are rare. Dr. Dewees,† in a practice of nine thousand cases, did not meet with an instance. Churchill's statistics‡ give the proportion as 1 to 5831 cases of labor,—a rate which is possibly too high. A general summary for the city of Philadelphia§ for fourteen years, from 1861 to 1874, inclusive, gives a total of 240,688 births, with 30 sets of triplets, or 1 in 8023. As showing how valueless statistics are as a basis to foretell results, I may refer to the years 1863, '68, '69, and '73, in which no triplets were reported in this city, and yet in the one month of February last four cases are reported to have occurred. Quadruple and quintuple cases are, of course, still more rare; but authentic cases are recorded. Thus, the museum of the London College of Surgeons contains five fœtuses of which a woman aborted at the fifth month. Ambrose Paré relates circumstantially that a lady of his time gave birth in one labor to *six* children, one of whom survived and was a French nobleman; but Ramsbotham, who relates the tale,‖ says that Paré was a

* Agnew's Surgery, vol. i. pp. 120, 121.

† Comp. Syst. of Midwifery. Philadelphia, 1808.
‡ Quoted by Cazeau, Treatise on Midwifery.
§ Board of Health Reports, 1874.
‖ Principles and Practice of Obstetrics, etc.

"good surgeon," but a "credulous philosopher."

WALNUT AND FORTIETH STREETS.

EROSIONS OF CERVIX AND EXTERNAL OS.

BY FERDINAND LESSING, M.D.

IN the *New York Medical Record* of February 10, 1883, there is an admirable original communication on the "Etiology of Cervical Forms of Non-Puerperal Uterine Hemorrhage," by that eminent observer, Paul F. Mundé, M.D. Under the heading of non-puerperal erosion of the cervix, Dr. Mundé claims two causes of this lesion:—first, catarrhal discharge from the cavity of the cervix, and, second, friction of the cervix against the posterior vaginal wall. Last summer, while practising in Minnesota, I had a married lady under treatment with ovarian congestion and cervical ulceration. The ulceration was on the posterior lip, and, while attempting to bring it with the aid of the uterine sound well into view, I had the rare opportunity of seeing the behavior of the cervix and os during orgasm: firm contractions alternating with relaxations about six to seven times in quick succession completed this act. There seemed to be in this case a hypersensitiveness of the mucous membrane of the cervix, analogous to the same condition in the male ureter, so admirably described by the late Dr. Beard. From the above observation I came to the conclusion that this behavior of the cervix is an important factor in cervical erosions. The forcible contractions must necessarily in some cases cause sufficient friction to abrade the cervical epithelium and mucous membrane of the external os.

This also may account for some of the cervical erosions of the virgin, as, for instance, in the masturbating class, and those whose sexual organs become morbidly sensitive by the reading of exciting novels, thereby producing repeated capillary turgescence, followed by the catarrhal state. Again, these erosions may be due, in some of the otherwise strong and healthy married females, to the same cause by over-sexual indulgence, independent of the actual contact of the male organ with the cervix. Not having seen uterine orgasm mentioned in any of the works on gynæcology as a cause of erosions, I respectfully report this probable additional cause to the profession.

1113 WALLACE STREET, March 5, 1883.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF PROFESSOR WILLIAM GOODELL, HELD FEBRUARY 28, 1883.

ENUCLEATION OF A LARGE INTRAMURAL FIBROID TUMOR FROM THE POSTERIOR WALL OF THE UTERUS.

GENTLEMEN,—The operation which I purpose to perform this morning is a serious one, and it is one which I may not be able to complete within the hour: it is the removal by enucleation of a large intramural fibroid tumor from the womb. This will be the third case of enucleation that I have had lately in this amphitheatre. One I had before you last Wednesday, in which, as you will recollect, during the operation the thinned-out fundus of the womb was accidentally perforated by the uterine sound. With reference to this accident, the penetration of the peritoneal cavity by the sound, I told you that several cases had been reported, but that to the best of my knowledge no fatal result had as yet followed. I can make a similar report in this case: no bad symptoms whatever were produced, and she left the hospital yesterday, and went to her friends in New Jersey, a little sooner than we desired, but she was feeling so well that she took the risk and went out, although it was against our advice. So you see the accident did not do her any harm. The other case was one in which the growth was limited to the cervical zone, and requires no special comment; the former, as you saw, was developed in the fundus, and we were obliged to invert the uterus in order to peel it out of its nest. Both patients recovered.

The present case is a married woman, 38 years of age. Her last child was born five years ago. She has had five children in all. Some time after the birth of her last child, which was apparently a normal delivery, in the spring of 1880 she became subject to serious hemorrhages at her monthlies, which became worse and worse, greatly reducing her strength and rendering her very anæmic. I first saw her two years ago: she was then bleeding furiously. She was almost bloodless, and had a translucent, waxy look, like alabaster, so that one could almost see through her. Without dwelling upon the history, I will state briefly that by medicinal means nothing could be accomplished. Ergot and muriate of ammonia were used without benefit, and yet her life was threatened by this constant

bleeding. I then took her into my private hospital and endeavored to remove the tumor through the vagina by enucleation. I took away a large portion of it which broke off in the efforts at removal. I then desisted for the time, and gave ergot in the hope that the remainder would be thrown off by uterine contraction. After waiting a couple of weeks, during which disinfectant washes were used, I again attacked it, and removed another large portion; and, if I remember rightly, I operated a third time before I succeeded in taking away the remainder of this large growth, which lay in the anterior wall of the womb. At my last examination I also found a small growth coming in the posterior wall of the womb, which I could not reach and had to leave for the time, while still keeping the case under observation. She recovered her health, and from that time her monthly flow was natural and she felt well until last March, nearly twelve months ago, when the hemorrhages reappeared, and have since then been frequent, profuse, and exhausting. As she is not yet 38 years of age, these hemorrhages will probably continue for a number of years before they could be checked by the occurrence of the menopause,—for twelve years or more, if her life be prolonged that far. In all probability, however, the bleedings will shorten her life materially, and may prevent her attaining the age when physiological changes will afford her the needed relief. But this, although a valid reason for performing an operation here, is not the main reason in this case. The woman lives in humble circumstances, her husband is poor, and her family needs her care, but she is so weak and prostrated as to be almost helpless. She has to be lifted from her bed to a chair or be carried up and down stairs, and is practically an invalid, bedridden most of her time. She is, therefore, especially anxious for relief from these hemorrhages, in order that she may again be able to perform her household duties.

The growth is an intramural fibroid of large size, and has been developed in the posterior wall of the womb. Now, my plan of operation is this. The woman, having been fully etherized before being brought into the room, is placed upon her back, with knees and thighs strongly flexed, and brought to the end of the table. I purpose to incise with a subcutaneous saw the bulging posterior lip of the cervix and pass in my finger in order to try to separate the tumor from the surrounding tissue of the womb,—peeling it out of its capsule like an orange turned out of its skin. I shall try to enucleate it, but may not succeed in removing it wholly at one sitting.

What are the principal dangers of this operation? They are two: (1) bleeding during the operation, (2) septicæmia after operation. The bleeding may be alarming, and in order to be prepared for it I have at hand some vinegar, and also Monsel's solution, to be used in case the other is unsuccessful. With regard to the occurrence of septicæmia, it must be confessed that there is a danger that she may die of blood-poisoning. It is to be remembered that the enucleation of a large growth leaves a decided cavity,—not so large, it is true, as the tumor which has been removed, for the tissues contract at once, but still large enough to detain decomposing fluids and thus lead to septic poisoning.

Now, suppose that I fail in removing all of the tumor in this operation, what shall I do to avert this danger? I must make large, free incisions into the wall of the womb and remove as much as I can. I shall then give the patient ergot in the hope that the rest of it will come away, as the uterus is made to contract. The confining capsule having been divided, there is nothing to resist the force of uterine contraction. It is surprising to note how large a tumor may thus come through a comparatively small opening. When forced out into the vagina it may be easily removed at a subsequent operation.

I shall now examine the patient. I find the os so high up that I can barely reach it with my finger. I pass in the sound blindly, but guided by my finger, in the direction of the cervical canal, which it readily enters. It has passed into the uterine cavity to the depth of five and a half inches, which shows that this is a tumor of considerable size. The growth has the ordinary characters of a fibroid tumor. After incising the capsule with Adams's subcutaneous saw, —which in such a vascular organ as the uterus, containing erectile tissue, is no light matter,—I shall, by means of Thomas's serrated spoon, and other curettes, proceed to separate the growth from its attachments to the uterine structures. The saw makes a bruised wound, which is less likely to be followed by hemorrhage than the knife.

The history of this case has led me to say, and to believe, that probably the operation in future for such cases will be oöphorectomy, rather than enucleation of the growth itself. This woman will have been subjected to four operations to remove this growth. Tumors of the womb are liable to be multiple, and in the operation of enucleation we may be able to remove some of the growths, while others will still remain to cause a return of the disorder. When the uterus ceases to be functionally active in the menopause, or becomes so after removal of the ovaries, these tumors are usually arrested in their development and may atrophy and disappear.

Last Sunday, in this building, I operated, in the presence of some members of the third-year class whom I invited to assist, upon a case of similar character, in which I removed the ovaries by abdominal section, the tumor being too large to be removed by the vagina. I was obliged to lift up the uterus with the large tumor out of the abdominal incision, in order to reach the ovaries behind it. It was troublesome, but thus far she has done very well.

You see that the tissues surrounding the growth are so vascular that the simple introduction of my finger is followed by considerable bleeding. I have provided this bowl of vinegar here upon the table, so that should the hemorrhage be more free than I like during the operation I shall have some injected. In the event of the failure of the vinegar to check it, Monsel's solution is also here, which can be diluted and injected, or applied upon a tampon. In one way or another we shall be able to get the bleeding under control. I prefer the former, as the iron solution makes such large tenacious clots as to give considerable difficulty in their removal, which by remaining might also favor septicæmia.

I have now cut into the capsule at the most dependent part of the growth. I am separating it from its adhesions by my finger, but I do not find it so easy to remove from the uterine wall as I expected: it does not shell out of its capsule as it should. Now, this is an operation that I consider a formidable one, because I must operate in the dark. I do not exactly know where the blood comes from, but I must get at it and check it the best way I can without being able to take up the isolated vessels as they are encountered. If I had cut into this with a knife, making an incision, I should have had much more bleeding. I am using the spoon-saw where the attachments are too strong for my fingers. I find that some of these adhesions are very dense; possibly the previous operation has led to inflammation, thus agglutinating the tissues. It is better to remove the entire growth at one sitting, if possible, rather than to leave it for a second operation.

There is a danger, in using my curettes, of getting into the cavity of the abdomen, as there is only a thin wall of uterine tissue between the tumor and the peritoneum. The opening made by such large instruments would be far more dangerous than that by the uterine sound, and would be likely to be followed by serious consequences.

The instrument I am now using I have found useful for separating these growths from the capsule. It is a sort of vectis, or lever, having a flat, broad, rounded end like a spoon-handle. It was originally made for the removal of the old-fashioned glass pessaries from the vagina. It is dull, and not likely to do any damage.

I have now separated the tumor on one side. Grasping the growth with the volsellum forceps, my assistant, Dr. Baer, is making traction upon it. I have, as you observe, provided a number of forceps and other instruments for traction, for my experience in other cases has shown that they will be needed. Here is one fenestrated like the obstetric forceps, devised for the purpose of holding the vaginal wall out of the way, when Sims's speculum is used. It is also a useful instrument for separating the tumor from the surrounding tissues; the end is blunt and rounded; it is not a cutting instrument. I have here another instrument, made expressly for making traction in these cases.

I find that the tumor is coming down, but it is breaking. Several pieces have been torn off by our traction. Some of these are round, and evidently are independent growths which, if left, would develop into large tumors, requiring further operation. This shows again that enucleation is less likely to give permanent relief than oöphorectomy.

The serrated curette of Thomas, which I am now using, is spoon-shaped, rough or serrated upon its edge, and is a valuable aid in the removal of these tumors from the capsule. Sometimes I prefer the smooth,

blunt instrument, but the serrated spoon is often indispensable. I shall now use the obstetric crotchet, which sometimes also works admirably.

There has been considerable bleeding from some large veins, but it is getting less as the attachments are separated. One trouble here is the breaking of the tumor into fragments. Always work towards the tumor. If you go in another direction you may penetrate into the rectum, the *cul-de-sac* of Douglas, the abdominal cavity, or the bladder. I am working, as you know, upon a growth in the posterior wall of the uterus. I have not entered the cavity of the womb at all. It is hard work, but the perspiration on my face is caused more by my anxiety than by the labor.

While I pause a few moments to rest, let me remind you that, as usually described, there are three groups of fibroid tumors of the womb; but, mind you, it is not often that you will find a typical one of either class. These are (1) the submucous, starting under the mucous membrane and projecting into the cavity of the womb; (2) the subserous, growing under the peritoneum from the fundus of the womb; and (3) the intramural, developing in the muscular tissue of the uterine wall. These growths follow the law of growing in the direction of the least resistance, you observe. They differ in location, but otherwise they are exactly alike. I believe that in the majority of cases fibroid polypi develop originally from these submucous fibroid tumors of the uterus.

The most prominent symptom of the presence of a fibroid tumor of the womb is bleeding. Sometimes there is also pain, but usually repeated hemorrhages are more likely to lead your patient to seek treatment than any other symptom. The remedies I have spoken to you about frequently, ergot in large doses,—that is, sufficiently large to influence the growth,—and muriate of ammonia, are both good; combined they make a splendid team. I have known fibroid growths to disappear completely under their use, or at least to become so small that they can be no longer found, and to cease to give any evidence of their existence. I have also given ergotin hypodermically; but when the tumor is large, and the repeated bleedings are exhausting the patient, who is very anæmic and likely to perish unless quickly relieved (although they seldom do die directly from this cause), it is necessary, by operation, either to remove the growth by enucleation or to reduce its blood-supply by oöphorectomy. This woman, I think, would have died but for the previous operation. When you have decided upon operating, then comes up the question, Can the tumor be successfully removed by enucleation? Sometimes it cannot. There is a chance that it may be a multiple growth, and also that, if you remove only a portion, sloughing and decomposition may occur, and septicæmia may set in and carry off the patient. In this case, for instance, there are so many small independent growths that it makes me think that the operation will be less likely to prove ultimately successful than oöphorectomy would.

I have now taken away the greater part of the growth, and the remainder is so loose that I think I can twist it around and remove it. Some of the fragments show calcareous degeneration. As my hour has expired, I shall dismiss the class, but I hope at my next clinic to give a favorable report of the operation. In order to check any bleeding, I shall now inject vinegar, and if this should not prove sufficient I shall tampon the vagina. I shall not do so now, as she will be kept under observation in the hospital.

[The operation was concluded after the class was dismissed. The tumor weighed twenty-four ounces (one and one-half pounds). Its largest portion was a single fibroid growth, but it also showed a number of smaller independent tumors, some as large as a small egg. The uterus, which had become inverted by traction, was restored to its place. The patient recovered promptly without a bad symptom.—Rep.]

TRANSLATIONS.

The Temperature in Measles.—From the study of a large number of cases of measles occurring in the Bicêtre, in the section of epileptic children and idiots, Drs. Bourneville and Bonnaire (*Progrès Médical*) have been enabled to make some interesting and important observations. The temperature was carefully and systematically recorded, with the following general results:

The *period of incubation* could not be exactly assigned, on account of the rapid development of the epidemic, and on ac-

count of the defective mental condition of the subjects. The *prodromic period* was better observed, and in a number of the cases a gradual and progressive evening rise in the temperature, with morning remission, was found. During this period the maximum temperature was 40.4° (104° F.), but generally the temperature oscillated between 39° and 40°. Wunderlich also noticed this early rise, and stated that "only very exceptionally does the fever at this stage ever attain to the maximum of the entire disease." It is soon followed either by a fall of from .4° to .8°, or by a stationary period during which it remains steadily at a fever-temperature. When there is a rapid fall, it might lead to the idea of the existence of an ephemeral fever, where the other symptoms are not sufficiently marked to guard against this error.

After this remission, or stationary period, there comes soon a new elevation of temperature, corresponding to the *period of eruption*. The temperature soon attains its maximum (40° to 41°), which exceeds slightly the early rise, though usually not more than a few tenths of a degree. This elevation is rapid, and the maximum is reached in twenty-four hours; rarely does it require two days. The highest temperature almost always coincides with the general extension of the exanthem, as affirmed also by Wunderlich. After this there is a fall. The *period of defervescence* in some cases immediately succeeds, and becomes continuous with this fall consecutive to the fever of eruption. In other cases the temperature again sustains a temporary elevation, though not so high as before, and for several days oscillates between 38° and 40°. In such cases, however, there are likely to be complications, or at least a persistence of the symptoms of the first period. The authors especially insist upon the importance of clinical thermometry as furnishing early indications of the appearance of complications.

THE INFLUENCE OF ACUTE DISEASES UPON EPILEPSY.—In the course of the epidemic of measles, above referred to, among epileptic and idiot children, Drs. Bourneville and Bonnaire observed that the acute disease exerted a favorable effect upon the convulsions, either reducing their frequency or arresting them altogether. In a work recently published, M. Séglas, from observations among epileptics in La Salpêtrière and Bicêtre extending over a number of years, concludes as follows:

1. Intercurrent diseases have, in the greater number of cases, a favorable influence over epilepsy.

2. In some this influence is only shown during the course of the complication.

3. In some this influence continues after the intercurrent disease has passed away, and it is in these cases that it may properly be said to modify the course of the epilepsy.

4. It is especially in acute diseases, provoking febrile reaction, that this modification is the most noticeable.

The authors of the former communications state that, as regards measles, the amelioration in the convulsive attacks in the epileptic idiots under observation was quite marked, but the influence was only exerted during the continuance of the fever. As soon as they returned to their usual condition of health the mental and neuropathic state was found to be exactly as it was before the appearance of the epidemic. —*Le Progrès Médical.*

GONORRHŒA AND JOINT-COMPLICATIONS —GONORRHEAL RHEUMATISM (!).—After a review of the literature of this subject, Dr. W. Nolen, of Rotterdam, is disposed to be sceptical as to the occurrence of true articular rheumatism as a complication, properly speaking, of gonorrhœa. He concludes that (1) occasionally gonorrhœa does become complicated with disorders which can be described as rheumatic. (2) In comparison with the frequency of the occurrence of the gonorrhœa, such accidents are exceptional. (3) The aforesaid disorders show the greatest variety in their extent and intensity: there is no such thing as a characteristic gonorrhœal rheumatism. (4) Since those persons who during an attack of gonorrhœa suffer with joint-inflammations are liable with subsequent invasions of gonorrhœa again to have articular seizures, it seems that the urethral inflammation does exercise some influence over the appearance of the complication. (5) The manner in which the gonorrhœa causes this complication is not clear. (6) Since the articular complication only very exceptionally occurs, and the symptoms show nothing characteristic, it can be concluded with certainty that the gonorrhœa attains the *rôle* of an occasional and not a determining cause. (7) The principal cause of the development of rheumatic complica-

tions, therefore, must be looked for not in the gonorrhœa itself, but in the affected individual. (8) It is also to be borne in mind that persons who contract gonorrhœa are also very liable to be exposed to other sources of injury, such as cold, excesses in drink, fatigue, etc., and that in many cases of so-called gonorrhœal rheumatism there may be only an accidental coincidence of rheumatic disease and gonorrhœa. In those cases, however, where it is necessary to acknowledge that gonorrhœa may occasionally give rise to rheumatic complications, it may be explained through a reaction of the gonorrhœa upon the whole organism (it is known that gonorrhœa may cause a slight fever and gastric disorder), so as to affect the physiological condition of some of the tissues, and thus is able, in susceptible persons, to give rise to rheumatic affections.—*Deutsches Archiv für Klinisch. Med.*, vol. xxxii. H. 1 and 2.

Peripleuritic Abscess.—The occurrence of a primary inflammation of the cellular tissue between the pleura and chest-wall, leading to the formation of abscess, has been asserted positively by competent authorities. In a communication by P. Martin (*Centralblatt für Chirurgie*, No. 36, 1882), two cases of peripleuritic abscess are reported in a boy of 5 years and a man of 34 years; in both cases, however, the peripleuritis had been preceded by a recent pleuritis, although in the interval the patients were in good health. Cases of secondary peripleuritis are especially apt to develop when inflammation occurs in a neighboring structure, as in disease of the vertebræ, the ribs, or the pleura; they must be of much more frequent occurrence than those of the primary form. Martin does not contradict the statements of good authorities as to the possibility of a true spontaneous or primary peripleuritis, but denies that the usually accorded symptomatology is of any practical value for the diagnosis and treatment of peripleuritic abscess, as compared with that furnished by the exploring needle and the knife.

Pathogeny of Pearly Epithelial Tumors and Cysts of the Iris.—In a note communicated to the Academy of Sciences, Paris, by Prof. Vulpian, an account is given of the results of a series of experiments made by Prof. E. Masse, of Bordeaux. Attempts at grafting fragments of the cornea or of skin into the iris, in rabbits, succeeded in a certain number in leading to the development of cysts. The experiments were conducted as follows. With a Beer's knife, a small shred of the cornea was shaved off from its lower part, and then introduced, through a puncture in the upper part, into the anterior chamber of the eye. This graft soon attached itself to the iris, and, losing its transparency, became vascularized from the vessels in the iris. In several experiments he has seen real cysts with transparent walls developing in the neighborhood of the graft, of which the origin should be certainly attributed to the corneal tissue thus abnormally implanted in the iris. These experiments may render important aid in solving the problem of the etiology of cysts and pearly tumors of the iris in man. M. Masse suggests that when in injuries of the eye involving penetrating wounds of the cornea with cutting instruments, if cysts or pearly tumors of the iris subsequently develop, their origin should be attributed to grafting upon this membrane certain fragments of tissues, either of the skin, the conjunctiva, or the cornea; and he claims that his later experiments prove that we can attribute this mode of origin to a certain number of cysts which develop in man consecutive to traumatism with a penetrating wound of the cornea.—*La France Médicale*, No. 10.

The Extent of Isolation required by Zymotic Diseases.—The Minister of Public Instruction addressed a communication to the Academy of Medicine, Paris, requesting information as to the duration of the time that it would be advisable to keep children from attending school after the contagious diseases. The following statement was prepared by M. Hillairet:

Smallpox, measles, and scarlatina require the children to be kept isolated and separated from others for forty days. For varicella the duration should be twenty-five days. The mumps are certainly contagious, and isolation should extend to twenty-four or twenty-five days.

For diphtheria, which is rarely seen in schools and colleges, the isolation should be forty days.

The same extent of isolation should be required for all cases, whether light or severe. If isolation cannot be perfectly maintained,—in a college, for instance,—the children should be sent away. Finally, before the children are allowed to associate

with their comrades, their clothing should be disinfected, and they should have one or two baths with soap.—*La France Médicale.*

EXTIRPATION OF A KIDNEY.—Dr. R. Bruntzel, of Breslau, reports (*Berl. Klin. Wochenschrift*, No. 49) the successful extirpation of the left kidney in a woman 33 years of age, on account of a large tumor of the capsule. The tumor was a fibroma, and weighed thirty-seven and a quarter pounds: it had been first noticed five years before. The growth occupied a large portion of the abdominal cavity, so that the laparotomy was made by a median incision from the xiphoid cartilage down to the pubes: it was conducted with antiseptic precautions, and a Lister bandage applied after the operation. A mixed anæsthesia of chloral, morphia, and chloroform was employed. The patient nearly perished on the table, requiring hypodermic injections of ether and artificial respiration, which was obliged to be continued for three hours. The patient subsequently had double radial paralysis (reflex?), which passed off in six weeks from the right hand, but continues still in the left. The patient otherwise was restored to excellent health.

INFLUENCE OF FOWLER'S SOLUTION UPON THE HÆMOGLOBIN IN THE BLOOD.—From an investigation made to determine the effects of the medicinal administration of some remedies upon the proportion of hæmoglobin in the blood, Dr. Fenoglio, of Turin, concludes that the iron preparations vary considerably in their effects; Fowler's solution increases the hæmoglobin, and this becomes more marked the longer it is given. In spite of the general opinion to the contrary, the administration of Fowler's solution is indicated in anæmia, chlorosis, and in general in all conditions in which there is a decrease in the hæmoglobin, for the influence of this agent is very evident in increasing the proportion of the hæmoglobin; and, furthermore, its use increases the appetite and produces a general improvement in the bodily appearance and condition.—*Medizin. Jahrbücher*, 1882, H. iv.

THE INFLUENCE OF THE NERVOUS SYSTEM UPON PATHOLOGICAL CHANGES IN THE SKIN.—In a valuable contribution to the *Vierteljahresschrift für Dermatologie und Syphilis* (1882, H. iii.), Drs. Arthur Irsai and Victor Babesim, of Budapest, call attention to an important series of experiments upon animals, in which various lesions of the central nervous system produced pathological conditions of the skin. The influence of the sympathetic nervous system over the skin was especially studied, and the authors conclude that their experiments demonstrate a direct connection between disease of the sympathetic and certain affections of the skin.

THE ACTION OF ARSENIC UPON DIABETES.—Dr. Quinquand, in an article recently published in the *Bulletin Général de Thérapeutique*, reports the results obtained from the administration of arsenic to animals in which diabetes had been experimentally produced, and also to patients suffering with mellituria. Fowler's solution was used in moderate doses. It was found that arsenic administered to diabetic patients usually produced a diminution of the daily amount of sugar excreted; but very often there is also a decrease in the quantity of water, and also a small but positive reduction in the urea. These results occurred uniformly in the animals experimented upon; they were less so in man, possibly because the doses were relatively smaller.

THE HYPODERMIC ADMINISTRATION OF POTASSIUM IODIDE.—At the hospital Lourcine, devoted to venereal diseases, experiments were made upon seventy-two cases of the effects of the hypodermic injection of iodide of potassium after the plan of Eulenberg and Thierfelder in Germany. It was found that a perfectly neutral solution containing eighty grains or more of the salt (.50 gr.) to the syringeful could be given without unpleasant consequences.

It is believed that in cases where an unconquerable intolerance of the stomach exists, or in those cerebral cases in which swallowing cannot be performed, and yet a rapid effect is desired, this method possesses advantages. Under other circumstances, and after the patient has become able to swallow, the ordinary method of administration by the mouth is preferable.—*Progrès Médical.*

EFFECT OF IODOFORM UPON TUBERCLE BACILLI.—Fränkel found, as a result of experiments upon tuberculous ulcers of the larynx, that the free use of iodoform did not destroy the bacilli, although it acted favorably on the progress of the ulcerative process itself.—*Berlin. Klin. Wochen.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MARCH 24, 1883.

EDITORIAL.

THE GROWTH OF PUBLIC SENTIMENT IN FAVOR OF CREMATION.

A FEW words upon cremation in the way of comment are suggested by the case of the prominent philanthropist of this city whose remains were recently burned at Washington, Pa. It appears very evident that a great change is taking place in public opinion everywhere, in Europe as well as America, with regard to this subject of cremation. The burning of the dead is no longer regarded as so revolting and unnatural as to send a thrill of horror through the community at its mere announcement; on the contrary, it is now listened to without surprise, and it even appears in the daily papers merely as an item of intelligence, unworthy of special comment. This in itself is a significant circumstance. The late meeting of the Congress of Hygiene at Geneva, as at the former session, unanimously passed resolutions advocating cremation as the only proper means of disposing of the dead in crowded communities, and calling upon civilized governments to remove any legal restrictions in the way of its general adoption. Unfortunately, this method is illegal both in France and in England: in each, however, cremation societies have been in existence for several years past, which have received encouragement and support from many of the prominent men in both countries; and it now seems probable that their efforts to modify the laws against cremation will soon be crowned with success. Of the English society, Sir Henry Thompson is president; and the association has also upon its rolls many other names of distinguished and influential members. It is said that Gambetta belonged to the French society, and would have been cremated had it not been contrary to law; and this society is now engaged in a renewed effort to have cremation legalized in France. As the advocates of the measure get stronger, the efforts of the opposition seem to be gradually dying out. It is beginning to be more generally understood that the great object of cremation is to perform in a few hours a process of oxidation that would certainly require, under ordinary circumstances, a century to accomplish, and in many cases perhaps much longer. There is no essential difference between the two methods of disposal of the dead, except in the element of time. The objections urged against cremation have been principally sentimental; but these are seen to have arisen from a false idea of the procedure. The strongest argument that has yet been raised against cremation is that it may destroy evidence of crime. This is a real difficulty, but not an insurmountable one, for the cases in which exhumation is necessary are extremely rare; and in all cases where death occurred suddenly, or under suspicious circumstances, cremation might be deferred for six months or longer, the body being kept, in the mean time, in a vault or some similar temporary place of deposit. Indeed, it might perhaps meet the objections of those holding different views upon this subject, if all bodies were required to be kept for a period of several months prior to cremation.

Our crowded suburban and intramural cemeteries constitute a constant menace against the health of the community, by poisoning both the air and the water, and acting as centres for the spread of contagious disease. It need scarcely be said that body-snatching need no longer be dreaded when only the ashes of the dead are deposited in the cemetery. A cremation society, it seems, might well be

formed in this city at the present time, as public sentiment is abundantly prepared for it. It is unfortunate that the enterprise of Dr. Le Moyne should be so distant as to render it inaccessible to many persons of moderate means that otherwise would avail themselves of its advantages. If a society should be instituted that would erect a convenient and accessible crematory furnace in the outskirts of Philadelphia, it could scarcely fail of immediate appreciation by the public, and there would be not the slightest doubt of its final success. The opinions of some of our prominent citizens are well known and have been publicly expressed with regard to this subject. How soon shall we have a Philadelphia Cremation Society?

THE MARINE HOSPITAL AND NAVY MEDICAL SERVICE.

DURING the late session of Congress there was an angry dispute, in which the Marine Hospital Service, in the person of its ambitious chief, took a part, which ought to be known to the profession; so that we make no excuse for briefly calling attention to the matter even at this late date. The history of the affair is as follows.

First, the Secretary of the Navy, at the instigation and in the interest of an unnecessarily large number of young line officers (who are without commands, and for whom there is really no employment in the present diminished state of our navy), attacked the Revenue Marine by bringing in a "bill" to absorb this body in order to get possession of twenty-five or thirty very useful revenue vessels, which were just what was wanted as commands for the unemployed young men in his department. This act towards a sister branch of the government deserved rebuke for its selfish object; but, in order to cover up the real object,—*i.e.*, additional vessels for the unemployed line,—line officers undertook to collect facts and figures and to set forth the advantages that would accrue to the staff departments by absorption of the same departments in the Revenue Marine; and the Engineer and Medical Departments of the navy, which did not desire or ask for such transfer or absorption, have been made to suffer, in the public press and the reports of the Revenue Marine. Surgeon-General Wales and the Bureau of Medicine and Surgery took no action in this matter; but a midshipman undertook to set forth the advantages that would arise from a transfer of the Marine Medical Department to the navy, and General Hamilton then attacked the medical corps. Making full allowance for the natural indignation of the Treasury Department and its officials, we think that Dr. Hamilton, in publicly comparing the professional and financial management of hospital patients in the two services, unreasonably washes linen in public, and makes comparisons which are uncalled for and unprofessional.

Perhaps we are inclined to look with suspicion upon the Marine Hospital Service, because upon it largely rests the odium of having caused the practical abolition of the National Board and thereby gravely injured the highest interests of medicine in this country. The navy of the United States seems to us the most pitiably mismanaged department of the government, and to have transferred the Marine Hospital Service, the Coast Survey, and the Revenue Service to it would have been disastrous; but this does not excuse the self-exaltation upon the part of the supervising surgeon, or the belittling by him of brother professionals. To a civilian, accustomed to the amenities of professional life, it seems very strange that when a doctor becomes a politician he should lose all remembrance of the code under which he first drew his professional breath.

THE readers of the *Philadelphia Medical Times* may remember an editorial published some months since in our columns, entitled "How they make Cod Oil at Swampscott," and will share our amusement at seeing it quoted in full, as an original article from the *Edinburgh Medical Journal*, in the *Boston Medical and Surgical Journal*. Starting into life near Philadelphia, becoming in a few weeks an aristocratic citizen of the queen's empire, with all traces of its plebeian origin carefully hidden, this classical (?) article finds, we trust, a peaceful resting-place in the hub of the universe, a few miles from the busy village which was the original cause of its being.

LEADING ARTICLES.

CONVALLARIA MAJALIS.

IN 1859 G. F. Walz discovered in this plant two active substances, *convallarin* and *convallamarin*. Of these the first is crystalline, insoluble in water, and, according to the experiments of Dr. W. Marmé (*Schmidt's Jahrb.*, Bd. cxxxiv. 166), when taken in doses of three or four grains, acts as a simple purgative. The glucoside convallamarin is soluble in water, and is the principle to which the plant owes its action upon the circulation. Marmé found that it kills by a direct action upon the heart, and in moderate doses first slows and then quickens the pulse; previous division of the vagi did not interfere with the development of these phenomena. The chief studies upon the physiological and therapeutic action of the lily of the valley are those of Prof. Germain Sée (*Bull. de l'Acad. de Méd.*, No. 27, 1882, p. 767) and of S. Isaew (*Hoffmann und Schwalbe's Jahrb.*, 1883, 122, from the Russian). Prof. Sée finds that in the dog it first slows the action of the heart and increases the blood-pressure decidedly, the respirations at the same time becoming fuller and a little less frequent. If a toxic dose has been given, the heart's beats become very rapid and irregular, the arterial pressure still being much above normal; finally, the pressure begins to fall, the cardiac pulsations to grow more feeble, and death occurs through syncope. It is stated that the pneumogastric nerves are weakened, but never paralyzed, whilst the general nervous system is not affected. In man the action of the drug upon the circulation is as in the lower animals, and there is said to be usually produced profuse diuresis and sometimes purging. In Isaew's experiments upon frogs with convallamarin, the heart was arrested in ventricular systole by two milligrammes of the pure convallamarin, the frog continuing to live for a long time, the remedy seemingly having no effect upon its general nervous or muscular system; isolating the heart had no effect upon the action of the poison. In the dog the phenomena of convallamarin-poisoning were as described by Prof. Sée, it being further noted that the pneumogastrics were not affected, that the pulse was often dicrotic during the stage of rapid cardiac action, and that the final arrest was diastolic, the heart-muscle not being able to respond to the most powerful galvanic stimulation. The observation that the heart of the dog is arrested in diastole is probably incorrect, as Dr. I. Ott has found that the arrest is systolic (*Archives of Med.*, Feb. 1883), and it is highly improbable that the action on the frog's and that on the dog's heart should be so diverse.

It is evident that convallamarin acts almost exclusively upon the heart and its contained ganglia, and possibly also upon the vaso-motor system, although concerning this we have no definite knowledge. Its action is evidently stimulant, and resembles in some respects that of digitalis.

The lily of the valley is said to have been long used by the Russian peasantry for the relief of dropsy, and in 1880 Drs. Troitzky and Bojojawlewsky called attention to it as a valuable remedy in cardiac valvular disease, especially when associated with dropsy (*Wratsch.*, 1880, 47). Prof. Sée recommends it in palpitation of the heart, in cardiac dilatation, fatty degeneration, and other forms of cardiac weakness, also in valvular lesions with failing heart-power; in a word, in the class of cases in which digitalis is now used. When there is dropsy, its very positive diuretic action renders it especially valuable, and in some cases it purges freely, probably through the convallarin. The value of the remedy has been confirmed by Prof. H. Desplats (*Journ. des Sciences Méd. de Lille*, Oct. 1882), and by several American

practitioners. Although condemned after trial by Dr. B. Stiller (*Wien. Med. Wochenschrift*, Nov. 1882), the remedy certainly should be carefully studied, first physiologically and afterwards clinically. In cases in which it has failed there is reason for suspecting that the preparation used has been a bad one. Dr. Marmé found that the fatal dose of convallamarin was, for the dog, 0.015–0.03 grm.; for the cat, 0.005 grm.; for the rabbit, 0.006–0.008 grm. Prof. Sée gives, of an aqueous extract of the whole plant, from fifteen to twenty-three grains a day; Bojojawlewsky, each day an infusion representing from fifty to one hundred grains of the plant.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

A YOUNG and favorably-known physician of our city has of late met trouble and annoyance in a form, though not uncommon, always interesting to the profession.

Dr. Charles W. Purdy had during December last been giving professional attention at his office to a Mr. Fred. Smith. Early in January Mr. Smith was compelled to take to his bed, in consequence of some acute character which his disease had assumed. New features developed, and Mr. Smith's condition grew very serious, and the friends, becoming alarmed, called Dr. Ludlum (homœopathic), who, rumor has it, criticised Dr. Purdy's treatment and diagnosis. A Mr. Chumasera, a particular friend of Mr. Smith, became very indignant, and publicly denounced Dr. Purdy in unmeasured terms. The facts quickly coming to Dr. Purdy's ears, a suit was at once commenced against Mr. Chumasera, he being responsible, for damages in twenty thousand dollars. The result has been a heated and somewhat bitter newspaper correspondence, and the exhumation of the body of Mr. Smith for careful examination. The post-mortem was conducted by four regular and four homœopathic physicians, resulting in the finding of nothing that could clearly account for death. The suit goes on. Let us hope that the future proceedings may be conducted with dignity, and with an eye solely to the vindication of right. It may be proper to state that professional men who are familiar with all the facts approve Dr. Purdy's diagnosis and treatment.

One of our oldest surgeons, a professor of surgery in the veteran school, while conducting a surgical clinic last week, introduced a little patient who was suffering from a nævus of the face. The professor, after demonstrating the tumor to the class, and describing the several modes of operative procedure, proceeded to inject a few drops of the solution of chloride of iron into the tumor. Immediately there was a slight convulsion, and the child was dead. Though used a number of times by this operator during a practice extending over thirty years, this is the first accident attending his use of this remedy. It is one of those occasional unanswerable arguments which come up against the use of dangerous means to an end, when safer agencies are available.

The College of Physicians and Surgeons celebrated their first commencement, at Central Music Hall, on the 13th instant, graduating a class of fifty-two. A banquet was given in the evening at the Sherman House.

March 15, 1883.

JAPAN.

THE following Japanese letter is so delicious that we take the liberty of publishing it, stating that it is a *bona fide* document, and that we should be very proud to be able to answer it in as good Japanese as it is English:

"TOKIYO, 27th Jan. (16th of Meiji).

"DEAR SIR,—I am very glad to say our happy New years come again, and I wish to have your kindness as you did before. I intended to see your newspaper, and change with my own *Iji Shinbun*, which issued thrice a month already send into your company. If you allow my hope, I shall saticify with my gratitude.

"I reamains, Dear Sir,
"Your faithfully,
"OBATA JINZABARO,
"Ed. of Iji Shinbun.
"SHITAYA NERIBEICHIYO No. 61, TOKIYO (JAPAN)."

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CLINICAL conversational meeting of the Society was held at the hall of the Society on February 21, 1883. Dr. O'Hara read, on behalf of Dr. Kilduffe, a note on "A Case of Pyæmia extending over a Period of Six Months, followed by Recovery" (see page 427).

TREATMENT OF PURULENT PLEURAL EFFUSIONS.

Dr. James C. Wilson presented two patients illustrating the successful treatment of purulent pleural effusions. The first patient, G. E. C., aged 25, entered the Jefferson Medical College Hospital, December 19, 1882. He exhibited great distention and deformity of

the left chest; dulness on percussion over all that side except under the clavicle, and posteriorly over the apex; vocal fremitus absent. The right side was resonant on percussion. The heart was displaced to the right. The family history of the patient was good. His sickness dated from an acute attack the previous year, and before coming to the hospital the chest had been twice aspirated, eight pints of pus having been removed on the first occasion, six pints on the second. On December 20, Dr. Wilson aspirated on the seventh interspace, and removed eighty-six ounces of pus. On December 24 a circumscribed abscess in the chest-wall, not communicating with the pleura, was opened. On January 1, 1883, he was tapped with a large trocar and canula, the latter being used simply for the purpose of introducing a flexible gum catheter as a drainage-tube. Fifty-eight ounces were removed at this tapping. The chest had by this time become somewhat flattened, and the heart was gradually approaching its natural position. The cavity was now washed out with a solution of corrosive sublimate, about one part in fifteen thousand of water. The cavity continued to decrease, and the patient to improve, until the present time. Only two ounces of solution can now be injected.

The second patient, W. T., aged 16, has also no unfavorable family history. The present trouble dates from April, 1882, and began with sharp pain in the left side, cough, expectoration, and distention of chest. He was aspirated about the latter part of May by an attending physician, who removed a pint of pus. About the 1st of July a fistulous opening was formed spontaneously in the region of the apex of the heart, which had been displaced. In a few days another opening was formed higher up, and in August a third opening on the median line at the lower part of the chest. At the time of entering the hospital, November 20, 1882, these sinuses were all discharging; the heart was displaced strongly to the right; the left side showed percussion-dulness. On December 1, 1882, he was aspirated, and twelve fluidounces of pus taken out. On December 14, Dr. Allis, at Dr. Wilson's request, resected about one inch of the seventh rib in the axillary line. The pleura was not at this time incised. On December 12 a drainage-tube was put in, and the cavity washed out daily with a solution of corrosive sublimate, one to fifteen thousand. At the present time he is markedly improved. The cavity is small, and the injected water comes away clear.

Dr. Wilson wished to call particular attention to the disinfecting and antiseptic qualities of corrosive sublimate, which he had used in these patients. He had employed this agent in varying proportions, from one part to fifteen thousand of water up to one part to eight thousand, and regarded it as superior in efficacy to any of the substances in common use for the purpose of checking the suppurative process in cases of this kind. He dwelt upon the advantages of using the aspirator in certain cases as a preliminary measure before performing an operation to establish a permanent fistula, definite information as to the character of the effusion, the resistance of the tissues, etc., being thus obtained, and the risk of the sudden evacuating of very large effusions being lessened.

Dr. O'Hara inquired why the natural opening existing in the second case had not been enlarged. Was there any special reason for not doing so, thus obviating the resection of the bone? In regard to the corrosive sublimate injections, he wished to know the strength of the solution used. Solutions of corrosive sublimate have not been found, as applied to external wounds by some surgeons, effectual antiseptic applications, as they have not prevented septic conditions from ensuing.

Dr. Eskridge said that the credit of using corrosive sublimate solution as a germicide for washing out the chest-cavity was due to Dr. Wilson. It is very powerful in this respect, and may be used externally, on the unbroken skin, of the strength of four grains to the ounce of water. It is better than carbolic, boracic, or salicylic acid, and many others. Cases like these presented to-night are, however, affected by circumstances. The amount of effusion influences the results of the tapping. A case had occurred at St. Mary's Hospital, from which two gallons of purulent fluid had been drawn off at one time. Free communication with the outside was established, and the cavity daily washed by means of a one-per-cent. solution of carbolic acid. The patient died in two weeks. Post-mortem examination showed the lung compressed to the size of the fist, and a pyogenic membrane lining the entire left pleural cavity. The lungs could not expand nor the walls of the chest contract sufficiently to fill up the cavity. In the cases shown to-night no such amount of effusion had existed. Dr. Eskridge inquired if Dr. Wilson had ever used capillary tapping, a method which he had used himself in a case of ascites, having drawn off two gallons. Such a method might be applicable to the cases here presented, as the first fluid is not very thick. Another method is the antiseptic method, which consists in inserting a canula or rubber tubing, protected by carbolized lint.

Dr. Nancrede called attention to a complication, which was rare in these cases, but of which he had met with an instance. This was either a co-ossification of the ribs, or, perhaps, calcification of the pleura. It occurred in a child, and was not known until an attempt was made to introduce the canula, when the resisting bone-like structure was found. It became necessary to use a metacarpal saw and cut away a portion of this structure.

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8. The various masses are so thoroughly worked that the materials are perfectly distributed.
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Dr. Wilson said that in the second case the natural opening seemed at first thought the most suitable channel through which to introduce a catheter for permanent drainage; but its position in reference to the heart is such that operative interference or even the presence of a tube might be dangerous. Besides this, the track was very crooked and irregular. He had therefore preferred to establish an artificial fistula at a more desirable point. He has had no experience with capillary tapping. In cases of large effusion he preferred large openings, as the washing could be done more satisfactorily. With regard to Dr. Nancrede's remarks, Dr. Wilson recalled a case that he had seen post mortem, in which calcareous degeneration of the thickened costal pleura had occurred. In the case of the boy presented to-night, resection was made necessary by reason of overlapping ribs.

NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, MARCH 1, 1883.

FORDYCE BARKER, M.D., LL.D., President, in the chair.

DR. KEARNS, of Pittsburg, was invited to take a seat on the platform.

Dr. LAURENCE JOHNSON related a case illustrating the possible dangers of intra-uterine injections by the use of Chamberlain's tube. The case was one of puerperal fever, for which he made intra-uterine injections during about a week from the third day after delivery. The greatest care was exercised in the introduction of the tube and in regulating the force of the injection. No accident happened until about the sixth day, when, after having exercised the usual care, the tube on being withdrawn was found stained with blood, and a little bleeding followed. The patient had a chill, the temperature went up nearly to 107° F., the pulse to 160, and this condition continued for two or three hours, and then subsided. The patient had done well since.

THE PRESIDENT remarked that within the past few years he had had occasion frequently to express a word of caution to those whom he had met in consultation, with regard to the continued use of intra-uterine injections in the treatment of septicæmia and puerperal fever beyond a certain period of time. It was well known that the uterine sinuses were ordinarily closed within three or four days after delivery. It had happened to him several times to see cases where the evidence had been conclusive to him that injections with the Chamberlain tube, a most excellent and useful instrument, had been continued too long, and, for this reason, that the uterine sinuses, after having become closed by nature's methods, were reopened, and a channel was made through which absorption could take place, and the uterine injection had in some cases, he believed, been the source of reinfection.

The scientific paper of the evening was then read by Dr. ISAAC E. TAYLOR, on "*The Naturally Faulty or Contracted Pelves; with the History of a Case of Labor, the Non-Delivery of the Child, and the Death of the Mother, after Craniotomy and Cephalotripsy.*"

The faulty or contracted pelves to which the author referred included the equally contracted, or justo-minor, the infantile, or immature, and the masculine, or funnel-shaped.

The patient, the history of whose case he related, was 29 years of age, a primipara, whom he saw on July 28, 1882, in consultation with Drs. Waterman, Judson, and others. At that time the pains were of short duration, occurring at intervals of ten minutes; the os was dilated to about the size of a half-dollar. The head was in the left occipito-anterior position. Ergot caused little advance. One-third of a grain of morphine hypodermically gave the patient some rest. The next morning the os was widely dilated. The head was still at the brim. The forceps were applied by Dr. Simmons, but without effect. Dr. Judson then made an unsuccessful attempt at version. Craniotomy was performed in the afternoon, while the head was at the superior strait, the transverse diameter, brow presentation. The cephalotribe was then applied, and the brain was more freely evacuated. Traction was made for fifteen or twenty minutes, but no advance was made. On examination immediately afterwards, the cranium was found to have resumed the shape it presented before the instrument was applied,—a fact which Dr. Taylor believed to be of not unusual occurrence. A long narrow-bladed forceps was applied, the head more securely fixed, and a right-angled blunt hook was inserted into the child's mouth. Meigs's embryotomy forceps were applied, and they succeeded in bringing the head into the inferior strait, and finally delivering it, at 6 P.M., after three hours' trial. Dr. Taylor believed that they had to deal with a generally contracted or faulty pelvis. The canal was so completely filled by the body of the child that it was impossible to make use of any means by which to bring down the arm. After an hour spent in ineffectual attempts at extraction of the shoulders, the mother expired at 7 P.M.

In his remarks upon the case, Dr. Taylor expressed the belief that the equally contracted pelvis occurred more frequently than those forms generally considered to be due to some vice of constitution, as rachitis, malacosteon, etc., to which far more attention had been paid hitherto by the profession. But, while the deformity was met with much more frequently than was supposed, as a general rule it gave no positive evidence or even suspicion of its presence before labor. The funnel-shaped and the equally contracted pelvis had been regarded, along with the infantile form, as

due to an arrest of growth or to some impairment of the constitution; but, as a matter of fact, it was exactly the reverse, the bony union taking place at an early age and being indicative of a healthy, not an impaired, constitution. That the equally contracted pelvis did not necessarily go with smallness of stature was evident in the fact that many women of deficient stature gave birth to well-developed children with comparative ease. This fact was illustrated in the case of a girl, twelve years of age, who some years ago at Bellevue Hospital gave birth to twins without the least amount of trouble, labor lasting not longer than an hour.

Velpeau had made the remark that he had not known of a case in which the form of pelvis under consideration had offered any serious obstacle to delivery, but within a few years afterwards he met with two cases, in one of which the patient died under delivery, and in the other Cæsarean section had to be performed. Many cases of difficult labor, in which the obstacle to delivery was probably attributed to the large size of the child's head, to imperfect ossification, to largeness of the shoulders, or to other causes, and in which instruments had to be resorted to in effecting delivery, were probably cases of unrecognized equally contracted pelvis.

The diagnosis of the equally defective pelvis was hardly ever made before the necessity for the use of instruments was recognized at labor. The position of the head might aid somewhat after delivery, Some knowledge might be derived from the form the cranial bones had assumed, an excellent illustration of which fact was seen in the specimen presented. The author attached little practical value to the various methods of pelvimetry which had been proposed. Probably the most accurate estimate could be formed by the introduction of the whole hand into the pelvis. If the hand could not be rotated freely, it might be assumed that the diameters were not equal to those of the normal pelvis. The most useful method for the measurement of the outlet was probably that of Breisky.

With regard to procedures, the use of the forceps was almost totally or entirely impracticable. If craniotomy had been performed, version might possibly succeed. If the case were seen early, while the head was resting in the pelvic cavity, Cæsarean section might be performed; otherwise laparotomy or symphyseotomy would be the operation which he would select,—preferably that of symphyseotomy.

DISCUSSION.

Dr. E. A. JUDSON, who had seen the patient, reviewed the clinical history of the case, and spoke of the difficulties which he encountered in the attempt to perform version. One of the most interesting questions which had arisen in his mind in connection with the case was the possibility of making the diagnosis of the existence of a faulty condition of the pelvis. The restrictions which Dr. Taylor had put upon the value of the different methods of pelvimetry seemed to him to be just. He referred to the method of Carl Schroeder for determining what he called the diagonally conjugate diameter by passing the two fingers so that the ulnar surface of the middle finger should rest against the promontory of the sacrum, then measure on the index finger the distance between this point and the pubic arch. This diameter having been obtained, it usually bore a certain relationship to that of the other diameters of the pelvis. He believed that some information might be obtained by abdominal palpation. With regard to external pelvimetry, Baudelocque's method was probably the best.

Dr. E. L. PARTRIDGE had observed that in the cases of this form of faulty pelvis in which he had found it necessary to perform craniotomy and cephalotripsy the subject had menstruated at quite an early period, and he thought this clinical fact might have some relation to the early ossification of the bones of the pelvis, and prove of some value, when it existed, in leading us to suspect that such deformity of the pelvis might be present. It had been observed in not a few cases that a difficult first labor had been followed by labors comparatively easy; and this might perhaps be accounted for by the fact that the deposit of salts of lime in the bones of the infant of a primipara was greater than in that of a multipara. He had found that the application of the cephalotribe after the delivery of the head was of aid in the delivery of the shoulders.

Dr. H. J. GARRIGUES thought that the diagnosis of faulty pelvis could be largely made out by external methods, one of the best of which was that of Baudelocque. He had found it easier to measure the transverse diameter of the pelvis than the conjugate. With regard to operations, he should consider them preferably in the order mentioned: first, gastro-elytrotomy; second, under certain circumstances, Cæsarean section, not according to the old method, but according to the methods more recently described in monographs; third, Porro's operation; and, last of all, total extirpation of the uterus.

THE PRESIDENT called attention to the important practical point that the general form and size of the patient furnished very slight indications with regard to the pelvic conformation. Doubtless all had been consulted more or less frequently by persons somewhat defective in figure with regard to the probability of their going through labor with safety. He had not infrequently known persons under five feet two inches in height to have a perfectly formed pelvis and to give birth to healthy and even large children. Again, he had frequently been consulted by those who in early life had suffered from antero-posterior

and lateral curvature of the spine, and probably also from hip-joint disease, with regard to whether it were probable they could go through labor, and in some cases he had made a careful examination by the various means alluded to by the author of the paper, and had been enabled to form a pretty accurate estimate as to the pelvic diameters and the probable result of labor, but not always; oftentimes he found it impossible to do so. Some years ago, a physician brought a lady to his office who had both lateral and antero-posterior curvature of the spine, and who in early life had also had hip-joint disease, and she was then at about the fifth month of pregnancy. He could discover no deformity within the pelvic cavity. Afterwards her physician wrote him that she had given birth to a child weighing ten pounds and a half before he could arrive at the bedside, the entire duration of labor being not more than two hours. On the other hand, a woman of handsome figure, large in size and well formed, had been delivered with the greatest difficulty, after craniotomy and cephalotripsy, by a celebrated French accoucheur, and was six months in convalescing. In a subsequent pregnancy Dr. Baker induced labor at five months and a half. Three years later, becoming pregnant a third time, and being anxious for an heir, her physician allowed pregnancy to go on until the seventh month. Labor was then induced: rupture of the uterus occurred, and the patient died undelivered. The President thought we should be extremely cautious in promising a favorable result in any case, even after making a most careful examination, for it was not always possible to determine the exact state of the pelvis.

Dr. TAYLOR, in closing the discussion, directed attention to the subject of the naturally faulty or contracted pelvis from a gynæcological point of view, and said he believed that this condition was the cause of many cases of uterine displacement which had erroneously been attributed to disease in the womb itself.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, MARCH 1, 1883.

THE PRESIDENT, R. A. CLEEMANN, M.D., in the chair.

DR. W. GOODELL presented the specimens and reported a case of

DOUBLE ENUCLEATION OF UTERINE FIBROIDS.*

In commenting upon this case, Dr. Goodell remarked that the to-and-fro linear movement of the saw made it a very efficient instrument for working in narrow channels, and that it had the further merit of lessening the amount of hemorrhage. He now used no other instrument for incising the capsule of fibroid tumors. The history of this unique case had somewhat shaken his confidence in the operation of enucleation, because, since the womb is affected usually with multiple fibroids, some one of these must invariably be left behind, and a second operation may become needful. He believed that in these cases oöphorectomy, as a safer and more sure remedy, had a future before it. He had, in fact, performed the operation four days ago on a lady who was so feeble from prolonged hemorrhage that he did not dare to remove the fibroid by enucleation, which is a more prolonged operation and attended by a greater loss of blood. She was doing very well indeed. For the same reason, not daring to enucleate, he had early last year removed both ovaries for a bleeding fibroid, but after a remission of several months the hemorrhage returned, and he will probably have to perform enucleation or hysterectomy.

Dr. B. F. BAER inquired, if the case in which hemorrhage returned after oöphorectomy was not of the submucous variety, ought not the operation to be limited to the interstitial and subperitoneal varieties, where enucleation is not possible? In one case reported by Dr. Byford, of Chicago, a uterine (submucous) fibroid went on increasing and hemorrhage continued after oöphorectomy.

Dr. GOODELL, from *a priori* reasoning, would expect less favorable results in submucous tumors, as they are more like polypi in their characters and would be more likely to continue to bleed. The case referred to in which oöphorectomy had failed was of the submucous type, and could have been removed by division of the mucous membrane and enucleation, had the patient's condition permitted it.

Dr. B. F. BAER narrated the history of a case in which

INDUCTION OF PREMATURE LABOR FOR THE RELIEF OF SUPPRESSION OF URINE

was considered necessary. The case occurred in the practice of Drs. Marcy and Mecray, of Cape May, N.J. About the sixth month of pregnancy, a general œdema was noticed, and the urine contained considerable albumen and a few casts. The amount of urine passed diminished rapidly, while the proportion of albumen increased and the patient became weak and anæmic. Every means was tried to increase the quantity of urine, but without avail. Among the remedies used were a wide range of diuretics and hydragogue cathartics with Basham's mixture. A sudden suppression of urine occurred at eight months, and but four ounces were passed in forty-eight hours; this became solid when heated: headache and spots before the eyes were now added to the other symptoms; a grumous discharge from the uterus had been noticed for

*See Hospital Notes, page 435, for report of the operation upon this case.

a week, and convulsions seemed threatening. Dr. Baer was called in consultation, and he agreed with them as to the advisability of inducing premature labor. A No. 9 flexible catheter was warmed and softened, and was, after great difficulty, introduced between the membranes and the anterior wall of the uterus. The cervix uteri had been lacerated in a previous labor, and was hard and small. Pains of a natural character followed immediately upon the introduction of the catheter. After some hours the pulse became weak and the patient faint; the os was but slightly opened, and it was considered advisable to administer stimulants and use Barnes's dilators and the Hodge forceps; a dead child was speedily extracted. The latter had been alive in the morning. Four hours after delivery, urine was secreted, and in two days the albumen had entirely disappeared. The patient recovered.

Dr. DE F. WILLARD reported a case of

INDUCED PREMATURE LABOR NECESSITATED BY GREAT ŒDEMA OF THE LABIA MINORA.

The patient, probably over 40 years of age, had been married about one year, and was pregnant with her first child. She suffered from headache, her feet and eyelids were swollen, and her urine showed one-sixth albumen and contained casts and blood-corpuscles. Basham's mixture, diuretics of every kind, diaphoretics, hot-air baths, hydragogue cathartics, and tonics were used, without a satisfactory result. Digitalis infusion and jaborandi alone gave a very temporary relief. The patient soon after her first visit called attention to the condition of the labia minora, which were found to be enormously swollen, shining, tense, and pitting on pressure. The urine amounted to from fifteen to thirty ounces per day, and steadily decreased in quantity. The œdema of other portions of the body decreased under the use of digitalis, but that of the labia increased. The patient could lie only upon her back, with the knees drawn up and as widely extended as possible; the pain was great and constant. Lancet-punctures were made, with temporary relief. The patient was steadily failing: her pulse was 150 per minute. An erysipelatous blush made its appearance and rapidly spread to the abdomen and thighs. Premature extraction of the child offered the only chance, and was at once performed. Gestation had reached eight months. It was a difficult task, as the labia were five inches in depth. Barnes's dilators and the Hodge forceps were used, and delivery accomplished in two hours. The child was dead, and the mother died three hours later.

W. H. H. GITHENS,
Secretary.

"THERE are two boating associations here," wrote a Japanese student home, "called Yale and Harvard. When it rains, the members read books."

REVIEWS AND BOOK NOTICES.

A TEXT-BOOK OF PATHOLOGICAL ANATOMY AND PATHOGENESIS. By ERNST ZIEGLER, Professor of Pathological Anatomy in the University of Tübingen. Translated and Edited for English Students by DONALD MACALISTER, M.A., M.B.

The fact that Prof. Ziegler's book has reached a second edition in Germany is of itself an evidence in favor of the author's work. The volume before us is a translation of the first part,—on general pathological anatomy and pathogenesis,—and is divided into seven sections,—malformations, anomalies in the distribution of the blood and of the lymph, retrogressive disturbances of nutrition, progressive or formative disturbances of nutrition, inflammation and inflammatory growths, tumors, and parasites.

It is seen from Prof. Ziegler's introduction that he completely ignores the humoral theory of disease, since he considers all diseases to have a local seat in some definite cell-group, and that anatomical tissue-changes lie at the bottom of the morbid phenomena observed during life. That these tissue-changes are not always discoverable, he thinks, is referable to one of two things: "either the difficulties in the way of discovery are so great that we can only in certain favorable cases, not yet met with, succeed in overcoming them; or that the tissue-change we are seeking eludes our optical appliances, inasmuch as it is not a change of gross structure, but one of chemical constitution and metabolism." Those who have followed the developments in the study of pathological anatomy cannot but have observed that diseases, which were formerly, of necessity, classified symptomatologically, are now arranged according to anatomical characteristics. It is true every morbid action cannot as yet be connected with a definite anatomical change. This, however, does not prove that such a change is not present: it is only an evidence of our inability to discover what special tissue- or cell-growth is implicated.

The section on malformation is well arranged, very concise, but fuller than similar sections in English works of this class, and is, on this account, a most valuable portion of the book.

Sections 2, 3, and 4 present in a very clear and comprehensive manner the various subjects of which they treat. The most advanced views on these topics are given, and conclusions are drawn which in every case show that the author has carefully studied and thoroughly investigated the subjects under consideration.

Section 5 treats of inflammation and inflammatory growths. The views here given in regard to inflammation are in many respects different from those accepted by the majority

of English and American writers. Thus, "the slowing of the blood-current, the dilatation of the vessels, the peripheral disposition of the white blood-cells, the migration of these from the capillaries and veins, and the migration of the red cells from the capillaries, are all of them referable to a molecular alteration in the vessel-walls." Therefore Ziegler concludes that "any injurious agency which is capable of altering the blood-vessels in a particular way is capable of producing inflammation." Exactly what this molecular alteration consists in we are not told, since it is said it cannot be histologically demonstrated; but we are to suppose that the vessel-wall becomes more permeable by its elements becoming in some way loosened; the cementing substance which unites the endothelial cells seems partially to give way.

According to our author, the effect of inflammation upon the tissues which are the seat of this process is the very opposite to that which is attributed to it by almost all writers upon this subject. It is said not to determine a proliferation of the cells of the part, but only their degeneration and death. He says, further, that there is no such thing as an inflammatory stimulus, and that multiplication is never induced by excitation of the cells outside of the vessels. Pus-corpuscles are considered as solely derived from the blood, and cells of the lymphoid type are never produced from fixed tissue-cells. This view of the origin of pus-corpuscles we cannot accept. That the white blood-corpuscles are a source from which pus-corpuscles are obtained is certainly true, but that it is exclusively so is just as true. The fixed cells of all tissues not only do not participate in the inflammatory process, but, from our observations, which are in accord with those of most pathologists, they furnish the greater number of pus-corpuscles, and are active elements in the reparative process of inflammation.

Inflammatory growths are described as granulomata. They are further said all to possess the clinical character of infectiveness, and most of them may be transferred from one person to another by inoculation. This group of infective granulomata includes tuberculosis, syphilis, leprosy, lupus, glanders, and actinomycosis,—all of which affections are said to be due to the invasion of the body by a virus or poison derived from the outer world or from the body of another person.

The author's views upon tuberculosis are those of the advanced school,—that is, he is a firm believer in the germ-theory of this disease, and says, "It may therefore be accepted as an established fact that tuberculosis is an infective disease induced by the presence of a specific bacillus." That there is such a germ as the Bacillus tuberculosis, or, rather, that there is a bacterium, and that it is to be found in the tuberculous formations, we are convinced from personal observations; but that it is the specific cause of tuberculosis we are as yet undecided to admit. It must, however, be confessed that this claim is gradually becoming more powerful, and many of our best investigators have acknowledged its truth.

The section on tumors is an excellent one, and should be carefully studied by all pathologists. The classification of these formations is, as far as possible, based upon their histogenesis, and their origin is always from a similar tissue. Thus, a connective-tissue growth never has its origin from any other tissue than connective tissue, and an epithelial formation is invariably derived from epithelium. The etiology of tumors is fully considered, but has resulted in no very definite conclusions. Local hyperplasia is objected to on anatomical grounds. Inflammatory origin is excluded, owing to the process of neoplastic histogenesis being something quite different from the formative processes which originate in inflammation. The more recent views of Cohnheim—termed the embryonic hypothesis, which may be defined as the development of tumors from embryonic germinal tissues which persist in the otherwise mature organism—have received from the author a careful investigation, from which he concludes that the hypothesis cannot be maintained, since "tumors may arise in tissues that are in very different states,—embryonic, growing, mature, or retrogressive." Ziegler's opinion of the etiology of tumors is expressed as follows: "We believe that the phenomenon [formation of a tumor] is ultimately due to some change affecting individual elements of a tissue, whereby they are rendered dissimilar to their neighbors. The change is manifested especially in this, that the normal checks to the indefinite growth of the proliferous cells are inoperative or inadequate, either because the formative and productive energy is increased, or because the restraining influence of the surrounding structures is diminished, or from both causes together."

Section 7 is devoted to parasites; and we know of no English book on pathology in which this subject is so ably and thoroughly considered. To those interested in the germ-theory of disease—and at the present day who is not?—this portion of Prof. Ziegler's book will be of great assistance in continuing their studies.

In conclusion, notwithstanding we have made some exceptions to the views of Prof. Ziegler, we think his labor has been well done, and we are confident that it will meet the approbation of all those interested in this subject. Dr. MacAlister has given us an excellent translation of the work, and his additions are such as to increase very materially the value of the book. The illustrations are unusually good, and most of them are new to English readers. J. H. C. S.

QUAIN'S ELEMENTS OF ANATOMY. Edited by ALLEN THOMSON, EDWARD ALBERT SCHAEFER, and GEORGE DANCER THANE.

There is scarcely a medical book in the English language more widely known than is Sharpey and Quain, as it is now usually called, and probably no book which has drunk so deeply at the fountain of perpetual youth, as successive generations of anatomists have arisen and passed away. In its first four editions it was the work exclusively of Dr. Jonas Quain: then it fell into the hands of Prof. Richard Quain and Dr. William Sharpey; then it was labored at by Dr. Sharpey and Prof. Ellis; then by Dr. Sharpey and Allen Thomson; then Mr. Schaefer was added to the editorial corps; and now, Dr. Sharpey being dead, the work has found its present masters. It is not necessary, and would scarcely be proper, to review a book which is so venerable with age: to pick flaws in it would be too much like quarrelling with one's grandfather. And we only say to-day that we have looked over such portions of the Anatomy as offer most chance for novelty or improvement, and are glad to find that the latest researches seem to be incorporated and the standard of the book fully maintained.

GLEANINGS FROM EXCHANGES.

BACTERIAL PATHOLOGY.—Among important observations which have been published recently regarding the relation of bacteria to disease, three—concerning syphilis, whooping-cough, and dental caries—deserve especial mention. The observations of Aufrecht, Birch-Hirschfeld, and others as to the occurrence of special organisms in syphilitic new formations, have been already mentioned, but some further investigations have lately been conducted by Dr. Morrison at Vienna, in the clinic of Professor Neumann. In fifteen patients under treatment he found bacilli constantly present in the pus collected from the surface of chancres and in papular syphilides. The organisms were present in still larger numbers in the deeper parts of excised papules and in the blood which escaped from the exposed surface. The pus was collected by means of a wire previously heated in a flame, and placed on a cover-glass which had been heated in a similar manner. The pus on the glass was then dried, warmed at the flame, immersed first in acetic acid and then in absolute alcohol. After a fresh desiccation it was treated with methyl blue or with fuchsine. At the end of half an hour the specimen was immersed in a solution of nitric acid (1 in 6). A microscopical examination then showed an immense quantity of cylindrical bacilli, readily distinguished by their intense coloration from the anatomical elements. The author does not venture to assert that these organisms are the same as those which have been described by Birch-Hirschfeld and others as the specific organism of syphilis; but he adds that he has met with other bacteria in the pus of soft chancres, longer and more delicate, very much like the bacteria of anthrax, but quite distinct from those which he has found in syphilitic productions.

In the sputa of patients suffering from whooping-cough M. Burger has found organisms which he regards as pathogenetic. They present the form of bacilli, some connected in chains, but most of them disseminated over the field, and giving the idea of micro-organisms in active process of segmentation. They differ from the Leptothrix buccalis, the rods of which are both longer and larger, and which occur chiefly about the masses of buccal epithelial cells. In order to demonstrate the supposed bacilli of whooping-cough, they must be colored by means of an aqueous solution of aniline, and then with fuchsine or methyl violet, using solutions which are not too concentrated.

From a series of researches on the part played by organisms in the causation of dental caries, M. Miller concludes that they cannot be regarded as the primal agents. Decalcification by acids generated by decomposition, etc., leaves the tissue of the tooth porous, and on it the organisms, bacilli, and cocci then develop. The bacilli can be traced into the ramification of the dental canaliculi. They have no power, however, on a tooth otherwise sound.—*Lancet.*

FERROCYANIC TEST-PELLETS AS A CLINICAL TEST FOR ALBUMEN.—Dr. F. W. Pavy, at the meeting of the Clinical Society of London, presented some pellets containing sodium ferrocyanide and citric acid. When used, these pellets are simply to be crushed and added to the urine to be tested. Albumen is at once coagulated without the use of heat. The test-pellets may be dissolved in a little water and overlaid with the urine, as in the usual mode of performing Gmelin's test, as a substitute for nitric acid.

Enough acid exists in the pellet not only for liberating the ferrocyanic acid from the ferrocyanide, but for more than neutralizing the alkalinity that is likely to belong to a specimen of urine limited to the quantity which has been recommended to be taken. Through this circumstance the test acts as well with alkaline as with acid specimens of urine.

Phosphates do not interfere with the validity of the reaction given by the test. They not only are not liable to be precipitated by it, but the acid present will promote the solution of phosphates already deposited.

Should the urine be turbid from lithates, it must be cleared by warming before the test is employed. A number of ways in which

this can be done will readily suggest themselves without recourse to the use of a spirit-lamp, where no spirit-lamp happens to be at hand. Regarding the fallacies of this test, Dr. Pavy states,—

"With urine containing oleoresinous matter, consequent upon the administration of an oleoresin medicinally, it is known that nitric and other acids occasion a precipitate. The same will naturally occur with the ferrocyanic pellets, and this is the only fallacious indication that I am at present aware belongs to the test. Error from this cause, whenever the conditions permit it to be presented, must be guarded against in the same way as has been hitherto done under the employment of nitric acid."—*Medical Times and Gazette.*

DETECTING BACILLI IN THE BREATH OF CONSUMPTIVES.—Dr. R. Charnley Smith writes to the *British Medical Journal* (January 20) that he has had excellent results from the following method of demonstrating bacilli of tubercle of patients affected with true tubercular consumption. He describes it as follows: "I allow the patient to breathe, at frequent intervals during the day, through two thin sheets of pyroxylin, or fine cotton, one layer in front of the other, and both of which are placed in the outer compartment of an ordinary 'pepper-duster' respirator. The layer of cotton, when so arranged, will act as a double filter, the external layer removing from the ingoing air all suspended particles, such as dust, microfungi, starch, etc., which are always more or less present in it, and which it is desirable to exclude, that portion of cotton which has been next to the mouth at the same time retaining those only existing in the outgoing current, and which have been emitted from the lungs, viz., micrococci, bacilli, and some epithelial cells. It is in the latter layer only that I look for the organisms peculiar to this disease. This I do by converting the pyroxylin into gun-collodion by means of a mixture of ether and spirit. Every vestige of cotton-fibre is dissolved in the above menstruum, but other organic particles remain suspended in it. To render the bacilli manifest, my plan is to pour the thin collodion thus formed on a microscope slide, and allow the fluid to run uniformly over the surface of the glass, then immediately placing the latter on one of its edges, that only the merest film of collodion may remain on the glass; the thinner the film produced, the more successful will be the experiment. The film is to be stained. This may be done by one of the methods well known to the profession for staining tuberculous sputum, such as that of Ehrlich or Heneage Gibbes."

SUCCESSFUL REMOVAL OF A DISEASED SPLEEN.—Dr. B. Credé, of Dresden, has lately put on record a case in which he removed successfully from a bricklayer, forty-four years of age, a spleen containing cysts (*Deutsche Med. Zeitung*, No. 44). The patient had received, ten years ago, in the left hypochondriac region, a blow from a brick, which had caused him some pain for five days. A year before the operation a tumor the size of a fist was observed in the left side of the belly, which grew at first slowly, and later on more rapidly, so as at last greatly to interfere with the patient's movements. On the day of operation (September 25, 1881) the belly is described as being greatly arched; a very movable fluctuating tumor, the size of a large child's head, adherent at its upper part, and not very tender, was felt in the left side of the abdomen. As the swelling was apparently not adherent to the skin or intestines, the operator saw no reason why an exploratory laparotomy should not be performed with a view to radical operation, should the case be favorable. The diagnosis rested between cystic spleen and hydronephrosis. Laparotomy was done, the incision being made to the left of the rectus abdominis, reaching from the ribs to the anterior superior spine of the ilium. A cyst presented and was tapped, a great deal of clear yellow slightly albuminous fluid being let out. Finally, seeing that this cyst was in the spleen, it was decided to remove that organ. The wound was treated antiseptically, but not drained. Healing took place without any bad sign, and the patient slowly gained strength. The tumor weighed about a pound (without the cystic fluid). Four weeks after the operation, doughy painful swellings of all the lymphatic glands were observed, which subsided after four months. Eight days after the operation the number of white lymph-corpuscles in the blood was found to be increased. Gradually the proportion of white blood-cells to red blood-disks returned to the normal, and no difference was found at the end of four months and a half. The patient was in good health ten months after the extirpation of his spleen.—*Medical Times and Gazette.*

THE SALICYLATES AND HEMORRHAGES IN ENTERIC FEVER.—Dr. James Fergusson, of Perth, writes, "At the time when salicylic acid and its compounds are receiving so much attention, the following facts may be regarded as at least worthy of statement:

"Last year, while resident in the infirmary here, I had an opportunity of testing the efficacy of certain drugs as antipyretics in enteric fever. These agents were used successively, each over a group of cases, and included the salicylate of soda. The latter had not been long in use when an increased frequency of hemorrhages from the bowel raised the question, Could the salicylate be favoring the production of that complication of the malady? Whether it were or not, the suspicion aroused dictated the withdrawal of the

salt from use in cases of typhoid. Shortly afterwards, I noticed that a foreign observer had reported the salicylate of bismuth, and, I think, also salicylic acid (though of the latter I cannot be certain, as I am not able now to find the report in question), to cause intestinal and nasal hemorrhages. The subject would not have been revived by me at present but for the recent experience of my successor in the resident's office of the above-mentioned institution, D. H. McLean Wilson, who joins me in placing the facts before the public. Dr. Wilson, in having recourse to the soda-salt in typhoid, found the same striking frequency of hemorrhages to follow closely. His employment of the agent differed from mine, in that he administered small doses of ten to fifteen grains frequently over the twenty-four hours, while I gave half-drachm or drachm doses at longer intervals apart. In the other respect, however, our experiences have been so similar as to warrant the facts being brought under notice, so that the important practical question involved may, if possible, be decided by the evidence of a number of observers."—*British Medical Journal.*

SYPHILITIC ORGANISMS.—Further observations of micro-organisms in syphilitic new growths have been published by Birch-Hirschfeld. He has examined a number of recently-extirpated condylomata, and also a syphilitic growth in the wall of the heart, and has come to the conclusion that the organisms are not distinct rods or bacilli, as he formerly described them, but merely micrococci, and that the appearance of rods is due to the linear association of a number of these elements. It is much more difficult to distinguish the individual elements than in the case of most micrococcal chains, because the organisms in syphilis are not round, but oval; so that they are visible not as points, but as short streaks. In most cases there are both monococci and diplococci; less frequently three or five individuals are united, which curiously simulate long rods with rounded ends. In this the observations of Aufrecht are corroborated. For the demonstration of the organisms in recent preparations, Birch-Hirschfeld prefers potash, by the clearing action of which the micrococci are visible in the tissue on account of their strong refracting power. In a broad condyloma they lie, for the most part, in small aggregations in the papillæ, and in many of the cells of the adjacent layer of the rete Malpighii. They may readily be detected in the juice of a recently-excised condyloma, by tinting in the ordinary way; and of the various tinting agents, Birch-Hirschfeld concludes that fuchsine and gentian-violet are the best. In the growths in internal organs the smallest micrococci are most abundant, and the larger forms seen in the condylomata are seldom met with. In gummatous scars they have been sought for in vain. In more recent gummatous products they were most abundant in parts which had the aspect of growing granulation-tissue. They were partly scattered, partly aggregated into groups, which never exceeded a granulation-cell in size; they were also distinctly seen within cells. Many epithelioid cells seemed to have their nuclei filled with these organisms.—*Lancet.*

TREATMENT OF NÆVI BY ELECTROLYSIS.—The cases for which electrolysis is eminently suited, according to Dr. William Newman, are superficial, dark-colored, sluggish, vascular growths, which do not possess special or abundant blood-supply. They waste away after one or two sittings as a matter of moral certainty. Next in order are those nævi which, agreeing with the above in their actual vascularity, yet have much more of surface-covering, and which do not therefore so readily, or to mere inspection, declare the conditions of their blood-supply. A majority of these cases will probably be found to be quite amenable to the electric current. On the other hand, the cases in which electrolysis will not, at least as a rule, succeed, are those which are intensely vascular, which are rapidly growing or have rapidly grown, and which, it is fair to conclude, have more or less direct communication with blood-vessels near at hand. Especially may this condition be suspected if they are near to vascular trunks, if there be local pulsation, or, again, if there be increase of temperature, a rapid filling after compression, a bright-red color with thinned integuments, all which point to the existence of very free blood-supply. Almost equally unsuitable for this special treatment are the nævi which are more solid and firm, in which, in addition to the tortuous blood-vessels, there is evidently a large amount of connective tissue. To sum up in few words, the degree of vascularity present may be taken as a very tolerable guide, and as an indication of the chances of success in submitting any nævus to electrolytic treatment.—*British Medical Journal.*

NEPHRECTOMY FOR CARCINOMA.—At a recent meeting of the Clinical Society of London, Mr. James E. Adams read notes of a case of lumbar nephrectomy for carcinoma. The patient, a male, aged 39, had intermittent hæmaturia for two years, pain in right loin, latterly profuse hemorrhage from the kidney, leading to marked anæmia; blood, pus, triple phosphates, and epithelium in urine. The disease was clearly located in the right kidney, but its exact nature was not certain. The operation was undertaken in order to explore, and, if necessary, to remove, the right kidney. By an incision parallel with the lower border of the last rib, the kidney was easily explored, and found to be the seat of a new growth, which had increased its size to about double the normal. In order to extract the organ it was necessary to enlarge the

incision upwards. The organ was adherent to the peritoneum, and in separating it the serous cavity was opened. Owing to the size of the tumor, the ureter and vessels could not be tied separately, but were encircled *en masse* by a whipcord ligature. The peritoneal wound was closed with a catgut suture; the skin wound was freely drained. The hæmaturia ceased at once. The wound healed in a few weeks; but the patient gained no strength, suffered much throughout from cough, and was transferred back to the care of the physician, and died forty-four days after the operation, with effusion into both pleuræ, plugging of the left renal vein, and numerous secondary deposits in the lumbar glands and on the ribs.—*Lancet.*

PUERPERAL DIABETES.—A paper by Dr. Matthews Duncan was read before the Obstetrical Society of London, the author pointing out the distinction between the slight glycosuria of pregnant and suckling women and real diabetes, with its polyuria and large amounts of sugar. Physicians and surgeons were well aware of the dangers introduced into their cases by complication with diabetes. But the subject of diabetes complicating pregnancy and parturition had attracted almost no attention, and this probably arose from its rarity, which might be accounted for by the disease frequently destroying in women the sexual energies, as it is said to do in man. The author had collected twenty-two cases in fifteen women, and they demonstrated the great gravity of the complication, as respects both mother and child. Of the twenty-two pregnancies (including those ending prematurely), four had a fatal result soon after delivery. In seven of nineteen pregnancies in fourteen women, the child, after reaching a viable age, died during pregnancy. In two the child was born feeble, and died in a few hours, making an unsuccessful issue in nine of nineteen pregnancies. The histories showed that diabetes may intervene on pregnancy; that it may occur only during pregnancy, being absent at other times; that it may cease with the cessation of pregnancy; that it may come on after parturition; that it may not come on in a pregnancy occurring after its cure. They showed that pregnancy may occur in a diabetic woman; that it may be not appreciably affected in its natural progress and termination by the disease; that it is very liable to be interrupted by death of the fœtus. —*Lancet.*

POINTS IN THE TREATMENT OF URINARY ABSCESS, STRICTURE, AND EXTRAVASATION OF URINE.—Reginald Harrison advocates the treatment of abscess in the perineum, complicating tight stricture of the urethra, with or without extravasation of urine, by free incision and the introduction and retention of a short straight catheter into the bladder, retained by a T bandage. He concludes—1. That in all cases of perineal abscess and extravasation of urine, associated with organic stricture of the urethra, perineal urethrotomy behind the stricture should be practised, and provision made for the direct escape of urine by the insertion of a tube into the bladder from the wound. 2. That the treatment of the stricture should be postponed until the more urgent symptoms of abscess and retention or extravasation of urine have been relieved.—*Lancet.*

MISCELLANY.

THE bad boy who produced a sewer-gas scare by scattering Limburger cheese about the house has been rivalled by the pupils of a ladies' school in this city. An examination was coming on; several of the young ladies were not prepared for it, and accordingly they put their heads together to devise a scheme for preventing its holding. One suggested that a sewer-gas scare would be about the thing, and accordingly the fellow-conspirators scattered Limburger plentifully through the desks. The odors which resulted convinced the principal that there was something fatally wrong about the sanitary arrangements of the building, and the examination was indefinitely postponed. If the proverb be true that it is not all gold that glitters, it is equally true that it is not always sewer-gas that gives out the penetrating odor.

COPPERHEAD VENOM.—Dr. I. Ott (*Virginia Medical Monthly*, February, 1883) comes to the following conclusions:

1. The venom of the copperhead is weaker in toxic activity than that of the rattlesnake.
2. The heart, with both kinds of venom, becomes greatly prostrated, and in rapid deaths is their main cause.
3. The venom of either snake does not affect the sensory nerves.
4. The sensory centres are affected by both venoms.
5. The muscular excitability continues to be little affected at the time of death by the poison of the copperhead.
6. The two venoms greatly resemble each other in physiological activity.
7. The cardiac force, rhythm, and frequency are lowered by both venoms.
8. The arterial tension is greatly lowered by both venoms.
9. The blood, after copperhead-poisoning, shows no microscopic changes of its globules, and no difference in its spectrum.

UNUSUAL SOURCE OF FOUL AIR.—An anecdote was related by a well-known sanitarian at a public dinner last week. He had examined a building in the vicinity of New

York, where he found that the janitor had carefully closed the valve in the cold-air pipe to the furnace, and turned the pipe into the chicken-coop. As the speaker pointed out, ignorance of the simplest details of house-construction, like this, on the part of those in command of them, is responsible for a good deal of the foul air.—*Sanitary Engineer.*

A WARNING TO DOCTORS.—A scoundrel of good address and genteel appearance has visited a number of physicians' offices in this city early in the morning for purposes of robbery. He is always in too much of a hurry to wait for the doctor, but sends up a message and leaves without an interview. Portable property is apt to disappear about the same time. He is not proud, and will take anything he can carry off. Look out for him!

THE bill introduced by Senator Adams to establish a State Board of Health and a system of registration of vital statistics for the State of Pennsylvania was defeated in the Senate Legislature on February 27. There were twenty-two votes in favor of the bill and sixteen against it, thus failing of the majority required by the Constitution. The opposing vote was cast by eleven Democrats and five Republicans.

EXPLOSIVE HYPOPHOSPHITES.—As Dr. H. Gifford, of Syracuse, was engaged recently in triturating a mixture of hypophosphite of lime, three parts, and hypophosphite of soda, one part, the compound exploded like gunpowder, the fine particles flying into his face and eyes and severely burning his eyelids and eyeballs. His injuries are likely to result in the loss of his left eye.

THE suit brought by Mrs. Georgiana Pierce, of Chicago, against her landlord and his renting-agents for damages for defects in the drainage of a house she occupied, resulted in her favor, the jury awarding her $1000. The verdict stands only against the agents.

A FEMALE CRANK.—Mlle. Bernard, the daughter of Claude Bernard, has been fined at Boulogne-sur-Seine, on complaint of her neighbors, for converting her court-yard, garden, parlor, and bedroom, into a kennel for destitute dogs. She felt that some reparation was due the canine race for the miseries inflicted on it by her father's vivisections. So says the *Louisville Medical News*,—we wonder with how much of truth.

HOMŒOPATHY IN RUSSIA.—The Medical Council of St. Petersburg have arrived at a decision, which the *Official Messenger* publishes, condemning the homœopathic remedy for diphtheria, which has lately been tried there in the hospitals of the Red Cross Society, as misleading and dangerous.

THE Brazilian government has awarded a gratuity of about £3500 to Dr. John Baptist Lacerda for his discovery of the antidotal virtues of permanganate of potassium in relation to snake-poisoning.

NOTES AND QUERIES.

PHILADELPHIA, March 7, 1883.

TO THE EDITOR OF THE MEDICAL TIMES:

DEAR SIR,—I should like to call your attention, and, through your journal, also that of others of the medical fraternity, to a new charity in our city which has been but recently in operation, and which bids fair to fill a want long felt in this community. The title of the institution is the Faith Home for Crippled Children, and its site is upon the northeast corner of Forty-Fifth Street and Osage Avenue, West Philadelphia. Mrs. Robert F. Innes, of No. 226 South Thirty-Ninth Street, established the home, beginning about the 1st of October, 1882, with one crippled child, for whom she had in vain sought residence among all of our well-known charities. The home now shelters ten poor crippled children, and there is no admission-fee; in fact, the home is entirely free, and is solely dependent upon "faith and work" for its successful existence.

Dr. James H. Lloyd, of No. 200 South Fortieth Street, is its visiting physician, and numerous people in this section of the city have given liberally. The home is under the immediate supervision of a member of an Episcopal sisterhood.

They need everything, and deserve all that our truly charitable citizens are able to donate.

Yours truly,

HENRY M. WETHERILL, JR.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 3 TO MARCH 17, 1883.

BROWN, HARVEY E., MAJOR AND SURGEON.—To be temporarily assigned to duty at Mount Vernon Barracks, Alabama, during the absence, on leave, of Captain T. A. Cuningham, Assistant-Surgeon. Paragraph 2, S. O. 17, Department of the South, March 6, 1883.

WILLIAMS, J. W., MAJOR AND SURGEON.—Upon being relieved from duty at Fort Cœur d'Alène, Idaho, will proceed to Fort Walla Walla, W.T., and report for duty as medical officer of that post. Paragraph 5, S. O. 24, Department of the Columbia, March 1, 1883.

CALDWELL, O. G., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty at Fort Fred. Steele, Wyoming, and will report in person to the commanding officer, Fort Laramie, Wyoming, for assignment to duty at that post. S. O. 23, Department of the Platte, February 27, 1883.

CUNINGHAM, T. A., CAPTAIN AND SURGEON.—Granted leave of absence for twenty days, to take effect from the 21st instant. Paragraph 1, S. O. 17, Department of the South, March 6, 1883.

HEIZMANN, CHARLES L., CAPTAIN AND SURGEON.—To be relieved from duty in the Department of the South, and assigned to duty at Columbus Barracks, Ohio. Paragraph 8, S. O. 58, A. G. O., March 12, 1883.

PAULDING, H. O., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence granted in S. O. 11, Department of the Platte, January 27, 1883, is extended twenty days. S. O. 23, Military Division of the Missouri, March 2, 1883.

TAYLOR, B. D., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty at Fort Ringgold, Texas, and will, so soon as able, report to the commanding officer, Fort Clarke, Texas, for duty. Paragraph 6, S. O. 25, Department of Texas, March 9, 1883.

WOOD, MARSHALL, CAPTAIN AND SURGEON.—Is assigned to duty at Fort Cœur d'Alène, Idaho. Paragraph 5, S. O. 24, Department of the Columbia, March 1, 1883.

HOPKINS, WILLIAM E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—The leave of absence granted December 28, 1882, is extended two months. Paragraph 5, S. O. 56, A. G. O., March 9, 1883.

BRECHEMIN, LOUIS, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To proceed to Fort Brady, Michigan, and report to the commanding officer for duty at that post. Paragraph 1, S. O. 41, Department of the South, March 14, 1883.